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ABSTRACT

This document offers the proceedings of a seminar in which participants from Fiji, Kiribati, New Zealand, Western Samoa, Tonga, Tuvalu, Australia, and the University of South Pactific met to discuss current and better practices for the production and distribution of textbooks and other teaching/learning materials. This seminar proceedings is divided into three chapters: (1) introduction; (2) summary of country experiences; and (3) problems, innovative approaches, and suggestions. Eight appendices also are included: (1) agenda; (2) participants; (3) the USP (University of South Pacific) extension services; (4) minimum requirements for staffing; (5) publication department of PIERC (Pacific Islanders Educational Resource Centre); (6) role of teachers' colleges; (7) requisitioning books in Fiji; and (8) basic equipment. (DB)

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APEID

TEXTBOOK PRODUCTION AND DISTRIBUTION IN THE PACIFIC

Report of a Sub-regional Seminar
on the Production and Distribution of Textbooks
and Other Related Teaching/Learning Materials

Nuku'alofa, Tonga, 26 August – 5 September 1985

Australia
Fiji
Kiribati
New Zealand
Tonga
Tuvalu
University of the South Pacific
Western Samoa

Unesco Regional Office
for Education in Asia and the Pacific
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Chapter One

INTRODUCTION

According to the work plan of the Asia and the Pacific Programme of Educational Innovation for Development (APEID) for its third programming cycle (1982-1986), Unesco convened a Sub-Regional Seminar on the Production and Distribution of Textbooks and Other Related Teaching/Learning Materials in Nuku'alofa, Tonga, from 26 August to 5 September 1985. The Seminar was organized by the Unesco Regional Office for Education in Asia and the Pacific (ROEAP) and its Asian Centre of Educational Innovation for Development (ACEID), jointly with the Ministry of Education, Kingdom of Tonga through the Tongan National Commission for Unesco.

Eight participants attended from Fiji, Kiribati, New Zealand, Samoa, Tonga (2), Tuvalu and The University of the South Pacific (USP). In addition Australia and New Zealand each provided a resource person/participant. Amongst the participants, those from Kiribati and Tuvalu attended at the expense of the Government of Australia; which also sponsored its resource person/participant. The New Zealand government sponsored its participant. (See Annex II).

The main purpose of the seminar was to:

i) collectively review the present practices and institutional arrangements for production and distribution of textbooks and other related teaching/learning materials, with focus on the first level of education:

ii) make an in-depth study of successful measures for improving the quality and use of textbooks and other printed materials while reducing their cost, analysing various difficulties and constraints, and the strategies for overcoming them; and

iii) develop suggestions for better co-ordination among administrative, educational and technical bodies and maximum utilization of available skills and resources

for improving the design, production and distribution of textbooks and other printed materials.

The seminar was the fourth in a series which began in New Zealand in 1983 and continued in Thailand in 1984 and the Philippines in 1985.*

Mr Sefulu Ioane, Director, Pacific Islanders Educational Resource Centre, the New Zealand participant, was elected as Seminar Chairman and Mr Saiyad Nizam-ud Deen, Fiji as Vice Chairman.

Visits were made to the Government Printing Department; the Taulua Press -- a combined Catholic and Methodist Church printing works; and the small industries development project. This was followed by tutorial sessions where problems were identified and suggestions formulated; skills and concepts were developed in planning for design, production and distribution of learning materials; and exemplar materials and systems prepared.

Volume One of this report gives a summary of country experiences, problems and innovations as well as suggestions for future actions. Volume Two gives selected country experiences from both the Manila and the Tonga Seminars in more detail, outlines successful approaches and provides details of the tasks and organization required in the planning, production and distribution processes.

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* 1. [APEID] Regional Seminar on Textbooks and Reading Materials, Wellington, New Zealand, 4-12 October 1983. Textbooks and reading materials; report. Bangkok, Unesco, 1983.

Volume One: The ready to read project -- the New Zealand Experience

Volume Two: Outcomes of the Regional Seminar

Volume Three: Textbook production and utilization in Asia and the Pacific (Papers from the participating countries)

2. [APEID] Sub-regional Workshop on the Development of Systems and Structures for Producing Textbooks and Other Related Teaching/Learning Materials, Bangkok, 17-27 September 1984. Textbooks and related teaching/learning materials for primary classes; final report. Bangkok, Unesco 1985.

3. [APEID] Regional Seminar on the Production and Distribution of Textbooks and Other Related Teaching/Learning Materials, Manila, Philippines, 12-22 August 1985. Production and Distribution of Textbooks. Bangkok, Unesco 1985.

Chapter Two

SUMMARY OF COUNTRY EXPERIENCES

Considerations in planning - a regional perspective

Curriculum. Current on-going curriculum revision activities in the island countries of the South Pacific Region, and the organizational structures within which most now operate, have their origins in the curriculum model introduced by the UNDP financed, Unesco Regional Secondary School Curriculum Development Project established on the campus of The University of the South Pacific in the early 1970s. This was a response to the requests of both the then emerging, independent Pacific states; and those countries still administered by colonial powers, to: (a) assist in the revision of existing curricula; and (b) produce new programmes of instruction more relevant to the needs of lower secondary school students.

By the early 1970s, most primary education systems within the region had developed sufficiently to provide some six to eight years education to a large proportion of the children of primary school age. With more children completing primary courses, there was increasing pressure from parents for governments and administrations to provide more places in secondary classes. This drew attention to the need to design less academic curricula, more suited to the realities of the social and economic conditions of the increasing number of students who would not necessarily continue with a full secondary education.

By virtue of the scattered geographical position of the island states across vast areas of the Pacific Ocean, the lack of curriculum design expertise amongst educators of the countries and the finite nature of the funding available to the project team, a centre periphery model for curriculum development was adopted and established in Fiji. In this model, content prototypes were developed by a central curriculum unit, given field trials, revised and then mass-produced. Dissemination then took place from the central point of production to the schools at the 'periphery', which

then implemented the new programmes. Thus the locus of curriculum planning and development within the primary curriculum revision structures that emerged in almost all countries as a result of the activities of the secondary school curriculum project, remains today within centralized authorities, usually centrally located curriculum units; little school-based curriculum development is evident. However, most curriculum units are manned by at least one permanent subject specialist for each of the subjects undergoing development, with currently practising classroom teachers forming part-time teams of writers who meet regularly outside school working hours and form in-service training staff during school holidays.

There is no uniform regional language policy for teaching either the vernacular or the foreign languages introduced by the foreign powers within the separate education systems; each country having addressed its own particular linguistic circumstances, which can be varied and complex. For example, Vanuatu has over 100 distinct languages and dialects with two different introduced metropolitan languages, English and French, plus an emerging 'lingua-franca', Bislama. Most countries are now producing syllabuses, teachers' notes and pupil's learning materials in the vernaculars, at least for the early primary classes. Most teaching is done initially for the younger children in their vernacular, with English taught as a foreign language. As the children proceed through the primary system, there is a phased reduction in the use of the vernacular and by the commencement of secondary school, it is common policy in most countries for students to be taught in the foreign language (English in most cases).

AUSTRALIA

With a swing to school-based curricula, principals in consultation with school councils -- which represent teachers, parents, students and community interests -- have the power to make curriculum decisions. Close links have developed between the school and members of the community who tend to make use of the schools after hours.

Language and policy. School attendance is compulsory between the ages of six and 15 years. The main emphases in primary education are on the development of basic language and literacy skills, simple arithmetic, moral and social education, health training, art, music and physical education. There are also optional subjects such as religious instruction, and some schools teach community languages and instrumental music. English is the main means of communication with all areas of the curriculum contributing to the development of competence in English. An

integrated curriculum, as used in many infant programmes, promotes language development through the provision of a wide range of activities that combine reading, writing, speaking and listening. At all levels of primary schooling, the experiences of art, music and drama are also integral to the development of language. Curriculum guidelines are produced by centrally-based curriculum committees to aid schools in designing their individual curricula.

Gone are the days when the same textbooks are ordered for students in all schools in a state. Students are asked to purchase as few textbooks as possible. Most schools use a government subsidy of approximately A$30 per student to purchase sets of books for class use. The books remain the property of the school and are not changed unless an alternative is distinctly better. Preference is given to books published in Australia.

Textbook production. Representatives of some 30 major publishing houses visit schools and subject associations to determine the needs of schools and the type of material required. About A$100 million worth of educational publishing is done each year. In addition, there are publishing sections within the various State Education Departments. These sources produce most of the textbooks used in schools.

Manuscripts of new textbooks and teachers' guides are usually written by teams of curriculum experts. Publishing houses tend to have their own editorial boards comprising teachers college lecturers and teachers. Often, teachers in schools are paid by commercial publishers to trial material in the classroom. Trial materials look as close as possible to the expected finished product. Education departments employ curriculum consultants to advise teachers and evaluate material.

Approval procedures and funding. Priority determining bodies within each State Education Department decide which projects are to be funded. Projects may have a new curriculum guide or student resource book as an outcome. Publishing funds are only available for for projects that are approved. Because schools have considerable funds to spend on books, commercial publishers are keen to supply any material requested. Many schools purchase reading schemes as the basis of their reading programmes. The availability of funding often limits purchases to building on to an existing programme rather than purchasing a new reading scheme. Despite the book bounty offered by the government for publications wholly typeset and printed in Australia, many publishers still find it more economical to have printing done in Southeast Asia.

Staff recruitment and training. Skilled education authors and editors are very scarce commodity. Because of the high cost of employing full-time staff, most publishing houses freelance work to editors and artists and pay on an hourly basis. Each Education Department has a publishing section which employs editors and artists. These are often experienced teachers who are seconded from the classroom and acquire editing and layout skills while on the job. Teachers tend to be seconded for up to five years and then return to teaching. It is frustrating to lose such staff and have to train their replacements. More and more publications are in languages other than English. Translators are scarce and typesetting is a problem.

Scheduling. Timetables are worked out for approved projects to ensure the material is written, trialled, printed, distributed and evaluated within the period allotted for the project. It is crucial that projects be completed within schedule as staff must return to schools when a secondment finishes. Commercial publishers also have strict deadlines as they are keen to get products on the market as soon as possible. Each publishing house, be it commercial or departmental, has a senior editor and a production manager. These two are responsible for co-ordinating publications through all stages of production.

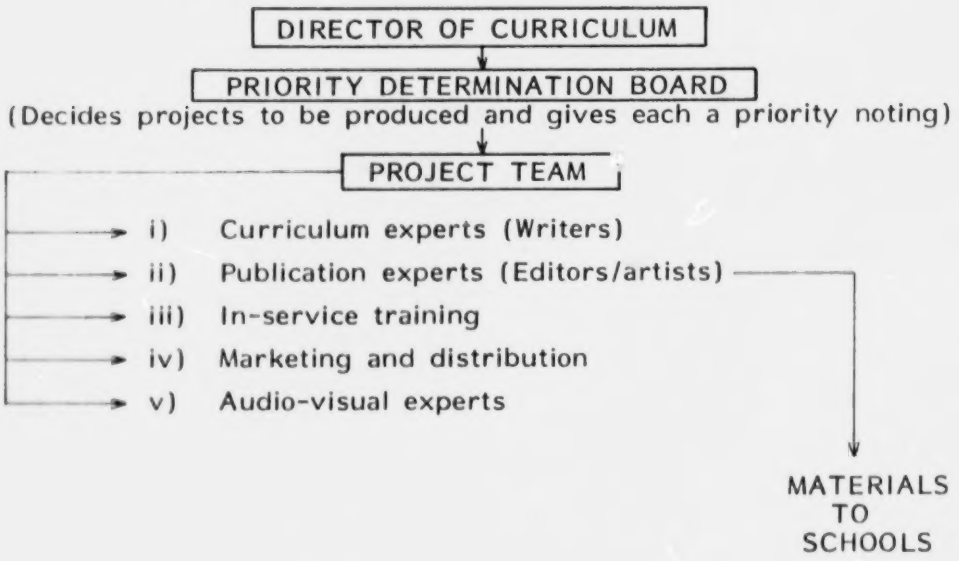
Promotion. This is a crucial part of publishing. A marketing unit has been established both by the GPO and the Education Department to ensure the school community knows what is available and when it can be expected in schools. Circulars and catalogues are produced to inform schools of new and existing products. Whenever possible promotion officers visit schools to advise them of products. Commercial publishers employ sales representatives to visit schools on a regular basis. Advertising brochures are sent to all schools containing details of new and existing books and prices. A tear-off order form is included.

Quality control. Quality control is not a problem as competition between publishers is keen. Some decisions to reduce quality have been deliberately made to keep prices low. However this has had repercussions as much reading material is now too flimsy to withstand normal classroom use. Regular visits are made to the Government Printing Office (GPO) to ensure that quality printing takes place. This is particularly important when colour printing is being done. Chemical proofs and blueprints are checked very carefully to ensure imposition of pages and copy is correct before printing occurs.

Costing. Most publishing houses have close ties with printers. Estimates for print jobs are often sought from a number of firms before a contract is signed (typesetters, platemakers and printers). Because of the volume of work even the GPO tenders

out printing to commercial firms. This has been beneficial in enabling bartering with the Government Printer to reduce prices as quotations are gained from commercial firms to challenge the estimates given by the Government Printer.

Figure. Organization of materials production


DIRECTOR OF CURRICULUM
PRIORITY DETERMINATION BOARD
(Decides projects to be produced and gives each a priority noting)
PROJECT TEAM
i) Curriculum experts (Writers)
ii) Publication experts (Editors/artists)
iii) In-service training
iv) Marketing and distribution
v) Audio-visual experts
MATERIALS TO SCHOOLS

Print runs and paper. Decisions are guided by the potential market of a book. Usually at least one copy of a publication is sent free to each school and additional copies are available for sale from the Government Printer. The Education Department pays for the initial distribution and the Government Printer pays for the sale copies. In Victoria, three scales of print run exist: (a) 3,000 copies - one per school; (b) 5,000 copies - two per school; and (c) 12,000 copies - sliding scale depending on the size of the school. If material has sales potential 20,000 copies are sent to be printed.

Because of price and restrictions of paper available from the Government Printer, offset paper 80 - 110 gsm tends to be used. Newsprint has proved to be too expensive. The major considerations are whether the material includes photographs, colour and type of binding. Dull art paper is extremely popular for relatively cheap books that contain illustrations and photographs.

Book specifications and editing. Because of the offset equipment used by the GPO most books are A4 or B5 in format. For story books, landscape formats are often used, but these tend

to be a problem with high speed printing machines with long print runs. Newsletters are limited to ten sides of A4 paper and a maximum run of 6,000 copies, corner stapled. This is the most cost effective. Decisions are made as to whether a book is to be self-covered or have a hard cover and the amount of colour to be used. The main editorial decisions after a manuscript has been written are made during typesetting, proof reading, creating the artwork, checking paste-ups and later checking blueprints and chemical proofs before printing begins.

Design and illustrations. Design and colour decisions are made in direct relation to the marketability, especially when printing books for children. Type size and column width are the main considerations following surveys on reading habits. Often typefaces are chosen that reflect the writing style of children. Few jobs are now being typeset. More and more are typed on high quality electric typewriters or word processing machines. Proportionally spaced daisy wheel typewriters produce excellent copy that is very close to typesetting. Current negotiations with the Government Printer aim to allow typesetting to take place direct from word processing disc to repro, without a typesetter having to rekey copy.

Many publications tend to be over illustrated. Designers come up with the overall layout concepts and efforts are being made to make these standard -- rather than try to make every publication different. After the design has been made, illustrators and paste up artists are used to finish the art work. Correction artists are employed at a low rate [of payment] to do corrections (e.g. fix incorrect spelling).

All material is kept to the minimum size to save cost. Standard paper sizes are used: A4 for senior students; A5 for infants; B5 for teachers' guides; and A4 for magazines. Charts tend to be A2. Numbers of pages are kept to 16, 32 or 48 pages, and in any case multiples of four page sections. Books of up to 60 pages can be saddle stitched (staple) and larger books are perfect bound or comb bound.

Printing. A large Web offset machine is used for print runs of more than 10,000 copies. Small offset equipment is used for smaller print runs. High speed photocopiers are increasingly used although the cost is higher. The higher cost is counteracted by costs saved in collating, as the photocopiers collate as printing occurs. The cheapest use of colour is spot sections of colour in offset printing. This can be used to highlight headings or sections of text. Often colour is used only on covers to make books look more appealing. In many books, colour photos or illustrations are limited to a set number of pages to lower printing costs. The only publications that use full colour throughout are

material to stimulate children to read or teachers' guides that are colour coded for various age levels. Costs of full-colour printing are prohibitive.

Scheduling. As publishing houses do not have large art or editorial staff and much of the work is done on a freelance basis, rigid schedules are prepared to ensure that publishing proceeds according to plan. Production managers ensure that time-tables are met and work completed on schedule. This has a close tie with budget.

Ordering. Advertising brochures containing details of new and existing books and prices are sent to all schools. A tear-off order form is included. Each year a catalogue is put out for all schools detailing all publications available, cost and where they may be obtained. The GPO puts out a similar catalogue of books for sale. The sale of textbooks to schools is seasonal, with the bulk taking place in January-March to coincide with the start of the school year. Reading material for students tends to be distributed twice a term.

There are few people in schools in December, January, May and September so little marketing is done at these times. There is usually a last minute rush to have material in schools before these holidays commence or else to have them ready to be sent at the start of the new term. Often release dates are pre-planned to tie in with radio and television promotions and in-service seminars. It is crucial to plan dispatch so that books are in schools when back-up material is given.

Distribution and warehousing. Storage space is very expensive and all publishers try to market material quickly to avoid having large stocks in warehouses. GPOs will only keep limited supplies of each book produced, so distribution is completed almost as soon as material is printed. If books do not sell, they are pulped or sold at discount prices after a couple of years to provide extra storage space. The GPO keeps computerised records of the numbers of books available and monthly sales records. These are used to determine when reprints are needed. Because of space restrictions only limited numbers of all publications can be kept for sale purposes. Both the Education Department and the Government Printer have an officer in charge of distribution to monitor when and where material is dispatched.

The Education Department has a weekly mail-out service to all schools in the State. This mail-out includes new curriculum materials, notices from the Director-General, and selected community service announcements. Usually only one copy of each item is included in each envelope, but on some occasions two, or

more, copies of a curriculum guide are sent. The cost of this distribution is free to clients.

Material printed by the GPO can be sent through the postal service at a reduced rate along with the Education Gazette once a fortnight. The GPO also employs a courier service to deliver bulk copies of readers to all schools in the state.

Commercial distribution agencies such as Gordon and Gotch are used to distribute commercial publications. They charge a percentage of the retail price for their services. Fees are not cheap, but many publishers prefer to pay this fee rather than set up their own distribution agencies.

Distribution is carried out by:

(1)	Australia Post:	if materials fit into envelopes
(2)	Road Courier:	if books are in cartons addressed to specific schools;
(3)	Rail:	to be collected by schools at their local railway station; and
(4)	Shipping/Air:	only used by commercial publishers to import books printed overseas.

Distribution officers pack parcels to be sent to schools. Automatic packaging and addressing machines help speed this operation. New equipment at the GPO will enable orders to be processed and packaged according to number and postal district. Apart from reducing packing time, this will reduce postal charges. Sometimes regional education officers distribute material to schools in their own district. This is usually done if the teachers require in-service training before using the books. Insurance of materials in transit is usually only taken by commercial publishers as costs are prohibitive.

Apart from the despatch of materials to schools, there is a separate despatch of material on a complementary basis. The number of copies sent out on such free distribution varies from 50 to 250 copies. They are sent to senior administrators, libraries for file copies, teacher training colleges and universities, newspapers and the media, consultants and regional directors.

The trend in packaging is towards clear plastic with support bands, if several books are in a parcel. Address information is packaged inside. Rolled up books are not popular as the books are hard to lie flat when opened and edges are often damaged in transit. Posters are folded and posted in envelopes as tubes are expensive and add greatly to the costs. The GPO boxes material

to be delivered in bulk to schools. There are usually 200 books in a box. A receipt system is operated by the Government Printer to ensure that boxes of books are delivered to schools. Such a guarantee is not possible with small mailings.

Paper envelopes are the most risky marketing parcel. Use of cardboard boxes and shrink-wrapped plastic wrappers are more efficient, but more costly. Schools are encouraged to compiain if parcels arrive in damaged condition. Any damaged goods are replaced if the initial print runs were sufficient. Schools tend to phone the GPO direct to ask why material has been delayed or insufficient numbers have been sent. Overall, distribution is slow, inefficient and costly. It is a major obstacle to publishing efficiency.

FIJI

Background. Primary school children up to Class VI receive full education. The Ministry of Education gives a straight grant of $12 per enrolled child to the school committees. This amount is not sufficient to run a school, therefore some school committees charge a small amount of money per child per annum to buy necessary school equipment. This ranges from school textbooks and library books to stationery and sports gear. Some schools, with the help of the Parents and Teachers Association and the School Committee have a fund raising programme. Sums of money are raised for specific projects. In other schools, children buy the books from the school canteen or the headteacher. Poor children who cannot afford the price of books are sponsored by service organizations.

Paper and book specifications. Curriculum development writers of the Curriculum Development Unit develop new materials along the broad guidelines of the policy papers prepared by the Minister of Education and senior officers, which receives Cabinet approval. With the exception of the vernacular languages all materials are written in English. After curriculum writers develop a text it is tried out and approved before being printed in its final form. The Educational Resource Centre produces the initial supplies of some books. Bigger and thicker books are printed by local commercial printers, by the Government Printer or by overseas publishers.

Approval of funds depends on the approval of the national budget. The printing section puts in its estimates and if it gets its estimated amount it will print as much as possible from the allocated funds. The schedule of production depends on requisition from the curriculum writers but priorities often change. The Education Resources Centre (ERC), together with the Chief

Education Officer Curriculum and advisory services, co-ordinate through the Government Supplies with the Government Printer and commercial printers to have the pupil's textbooks and other relevant materials ready for supply on requisition.

The ERC is headed by a Senior Education Officer with an Executive Officer to account for funds and carry out the clerical duties involved with ordering materials. There are two typists and a graphics artist. The printing staff comprises a senior printer and a staff of five.

Production process. The quality of work depends on the availability of funds, materials and expertise. Within the limitations of the vote, rough estimates for printing are made at the ERC and further costing is done by commercial printers and the Government Printer. All books printed by the ERC are a standard pattern. The curriculum writers choose the size and print with help from the resource material printers. The necessary specifications are supplied to outside printers and the Tenders Board calls for tenders.

Design. Some of the curriculum writers choose their own book design but as it is not always possible to fulfill their requirements a compromise is often sought. Typesetting is done by electric typewriter, composer, word processor and computerized typesetter in the ERC. Some subject writers, who are good artists, do their own illustrations. Sometimes the services are sought of outside illustrators or photographers.

Printing. Duplicating and offset printing are the two main processes used at ERC. The three offset machines are Hamada, Rotaprint and AB Dick. These are backed by two guillotines, a camera and platemaking machines. It is possible to do two or three colour jobs but the cost factor and time constraints do not allow this process. Books printed by commercial firms are sometimes multi-colour. For the sake of cost effectiveness the books are printed in A4 and B5 sizes while charts are done in A3 size. Schedules are set but certain priorities from time to time cause a shift in the target dates.

Warehousing and distribution. There are three Government Supplies centres which are each given estimated numbers of copies to be used in the ensuing year. These copies are ordered and kept in stock. Local bookshops also have a number of copies for sale. The ERC deals more in teachers' resource material and initial supply of texts to the pilot schools. It is more of a supply centre than a storage place. Government Supplies keeps ERC informed of the level of stock of different titles. The ERC places printing orders to bring the level of stock up to meet the demands of the schools. All parcels from ERC go through the postal

services -- without cost at present. Orders placed through Government Supplies centres do incur freight charges when they are sent by road, ship and air.

The Government Supplies Requisition List also includes the book list supplied by the education ministry. These lists are sent to all schools. All schools have their own requisition book and they may prepare requisitions of their needs and send them to Government Supplies together with the money, in the form of an open cheque twice in a school term. In some cases the headteacher comes with cash and collects the goods at the supplies centre. The requisition is prepared in four copies. On receipt at Government Supplies the cost is calculated and a copy of the requisition is attached to the goods together with an official receipt.

Notices in the Education Gazette list new publications and a chart is also prepared showing available titles. The Ministry holds itself responsible for the non-supply of materials. As far as possible the ERC maintains communication through letters, the telephone or personal contact.

The ERC wraps small parcels with brown paper and masking tape to send through the postal service while Government Supplies uses cardboard cartons to send supplies to island schools according to local shipping schedules.

KIRIBATI

Background. Primary school education is compulsory between the ages of 6 and 11 years, i.e. Classes I to VI. Parents of primary school-age children who do not ensure attendance are convicted. According to the National Digest of Statistics, as at 1 March 1985, there were 13,308 pupils attending primary schools. Of these 6,745 were male and 6,563 female. Church primary schools were amalgamated into a unified system of education under Government control in 1977. Since then the number of Government primary schools gradually increased from 75 in 1977 to 108 in 1985. In accordance with the national policy on education, the following activities must be taught in all primary schools: English (pre-reading Classes I and II, Classes III to IX); mathematics, vernacular or Kiribati language, environmental studies, art and craft and physical education (Classes I to IX); printing (Classes I to VI); community skills for boys, home economics for girls and commerce classes VII to IX). Religious instruction and creative activities complete the list. All government primary schools are bound to cover a set curriculum for each class -- however the composite classes in many primary schools become a major problem to the teachers concerned.

Teacher education. There is a three-year programme of pre-service training for primary school teachers conducted by the Government Teachers' College. Students who have completed a minimum of Form V education are allowed to sit for enrolment. Candidates with the highest marks are offered places up to the limited intake required for a particular year. Apart from the teacher training programme, the third year students are offered extension courses at the local University of the South Pacific Centre, which are paid for by the College. On completion of the training, the successful students are awarded a Teacher Grade 3 Certificate, known as the minimum qualification in the teaching profession.

During school vacations, the Island Based In-service Training and the School Based In-service Training Programmes are conducted by the Teacher Training College staff and the Curriculum Development Unit staff. The two major purposes of in-service training are: (1) upgrading teachers' knowledge in teaching; and (2) introducing new materials. In 1983 the target of replacing untrained teachers was reached, with a teacher to pupil ratio of 1:31.

At the beginning of 1985 there were 452 teachers, with an almost even number of males and females. Their gradings varied from Grade 1 (the Highest) to Grade 5, with most being Grade 3. There are still about 120 Grade 4 and 5 teachers in the service and the Teachers' College is conducting a series of upgrading courses for 12 Grade 4 teachers at a time, for a duration of one term. Successful students are promoted to Grade 3. No such plan exists for the 20 or so Grade 5 teachers.

Curriculum Development Unit. The Curriculum Development Unit (CDU) is staffed with 11 personnel comprising a Curriculum Development Officer, Assistant Curriculum Officer, six writers for English, mathematics, environmental studies, vernacular, commerce and community skills. A typist, bookbinder and machine operator complete the team. The Curriculum Development Officer is the head of the Unit and is responsible to the Principal of the Teachers College, who is in turn responsible to the Senior Education Officer (Primary).

The six curriculum writers are classroom teachers who have now been seconded to the Unit for some years. The bookbinder and machine operator are both casual labourers of the Teachers College who have been seconded to the Unit for nearly ten years. As the longest serving staff in the Unit they have proved themselves indispensible in their respective duties and it is unfortunate that they are still paid as casual labourers.

Curriculum materials. Some teaching materials are still imported from Australia, New Zealand and Fiji; especially the English programmes for Classes I to IX. This is because these classes still use the South Pacific Commission (SPC) reading series. Similarly the Link book series from the Fiji Department of Education are found to be the most suitable English language materials for Classes VIII and IX. Teachers reference books for environmental studies are also imported.

Through the Australian Aid Project (ADAB), the Ministry of Education has organized writing workshops since 1976 to develop materials to replace imported instructional materials. These workshops, conducted twice a year during school vacations, are still continuing. With the help of a team from Salisbury College of Advanced Education in South Australia, and the University of the South Pacific (USP), the writing processes, in all the subjects mentioned above, have been successful. New materials are re-checked by the subject committees concerned before printing. All new materials are sent to schools for trial. Copies of feedback sheets are also sent together with the materials for the teachers to complete after they have tried out the materials. The Minister for Education and all senior Department officers get copies of trial materials for their comments. Final printing takes place only after the subject committee has studied all the comments. Materials are issued free.

It is CDU policy to reprint every five years. Money has been provided through the ADAB programme, as well as typing and printing equipment and resource personnel. The CDU, like other Government sections, receives an annual allocation allocated from Government current expenditure. The amount allocated to the Unit is just enough to maintain the printing process and cover minor expenses incurred in its smooth running.

NEW ZEALAND

Curriculum, budget and approvals. Curriculum maintenance, development and review as a national concern, centres for its coordination on the Curriculum Development Division of the Department of Education. The Division has officers specializing in the various curriculum areas, and in the development and production of resources across the media to support curriculum implementation.

To identify needs to be met within the school curriculum, the Division consults with the many interested groups in the education system and the community to assess the best means of meeting them. Planning to meet these needs is the concern of both curriculum and materials specialists. It involves considering pri-

orities. What resources, financial and human, are available? What priority is to be given to the various calls on these resources? In the case of any idea for education, or a publishing project, an early assessment has to be made whether additional resources of finance or people will be required. This is particularly so when priorities cannot be met within existing resources. Annual budgeting is an exercise in adjusting priorities and determining the state of readiness of the various publications on the programme.

The publishing programme is presented to the Director, Curriculum Development for approval each year. Approvals for special projects requiring new funding or people are given at the ministerial level. The latter approvals are usually for a specified expenditure with a time schedule for their completion. The publishing programme as a whole is governed by the levels of priority of the various jobs, and their state of readiness. Both budget and workload are planned with a 10 to 15 per cent overload to ensure delays will not affect a full programme of work and expenditure.

Staff recruitment and training. The Department of Education has available to it a pool of expertise in all facets of publishing in the form of the School Publications Branch. The permanent staff are drawn upon for all new projects, except where a special area of expertise is required, such as a specialist in junior class teaching, who may not be available and may need to be seconded from the classroom. Otherwise recruitment is from those experienced in writing and teaching (editors) or illustration and design (art editors). Training is done almost entirely on the job, though a basic level of training (i.e. a tertiary qualification) is required.

Trial/evaluation. There are several forms of trial in the New Zealand set up. A nationwide trial is conducted where not only teaching and learning objectives are being tried out, but also community acceptance as a whole. Thus in the trial of the Ready to Read series, over 1,200 copies of each trial booklet were printed and distributed to the 11 major primary education districts. Another method used is to cluster pilot schools (e.g. four lots of five schools) who will try out materials still in draft form.

Teacher training. The trial process can itself be useful teacher training. It will also demonstrate the needs for in-service teacher training in the implementation of a project. There is considerable demand for in-service training in conjunction with the introduction of new materials. In many cases, the materials themselves have to be designed to offer maximum support without the benefit of any in-service training.

Free issue policy. All publications produced by the Department of Education are issued free to schools. All become school property, except for syllabuses which are issued to teachers, and teachers college diplomates, for their personal use.

Production process. This process starts from the time that the completed manuscript or author's draft, comes to hand within the publishing organization. Though the editor, and sometimes the designer, may have had considerable dealings with the author(s) beforehand, a clear set of procedures is followed strictly from this point. The observance of publishing procedures is integral to the maintenance of quality control. All people involved in a publication's development are encouraged to feel a sense of personal responsibility for quality control.

Staff responsibilities. The staff in the School Publications Branch are grouped into three broad roles -- editorial, art editorial, and administrative. In any one publication a team of people will be involved. It is the editor who has the executive responsibility for ensuring that the publication proceeds through all stages. The assistant editor acts as a copy editing and stylistic back-up. The chief editor supervises the work of the editor in a series of informal consultations. The art editor is responsible for designing and executing the design of the publication, and usually for liaison with the printer. The chief art editor supervises the work of the art editor in the same way as the chief editor does with the editor. The administration officer will be called upon to provide information and services for the distribution of the publication and will maintain financial records. The education officer has oversight of the overall planning and progress, and performs an approval role at certain stages of progress.

Beyond the immediate organization are various people with whom the members have dealings. They are:

a) the contributors (authors and researchers, and sometimes contract editors or designers, artists and photographers);

b) the curriculum originators or coordinators (the specialists within whose area the publication falls);

c) the senior approving officer (the Director, Curriculum Development; and the Assistant Director, Resources Development); and

d) the printer.

They will deal with various other experts or consultants as required.

The Stages in the procedures are as follows:

Editing:	the editor works through the manuscript to ensure clarity of expression and organization, accuracy, and appropriateness for the reader.
Style:	the assistant editor works through the manuscript for consistency in style -- in usage and in format, according to the guidelines of the house.*
Mark-up/ design:	the art editor decides on typesetting specifications and the overall design of the book and its specifications.
Requisition:	the quantity is assessed by the administration officer on the basis of information supplied by the curriculum originator; specifications for the publication (size, format, number of pages, ink, paper, binding, collation, etc.) are agreed upon; the Education Officer approves the requisition.
Typesetting:	the manuscript goes to the printer for setting.
Design and commission:	while typesetting takes place, the art editor does major planning for design and commissions all illustrations.
Galley proofs:	typeset galleys are proof-read and corrected by the editor and assistant editor.
Paste-up:	the art editor pastes up the publication, sizes the illustrations, and gathers all the artwork for the publication into one folder; the paste-up goes on an approval round, including editor, assistant editor, chief editor, chief art editor and Education Officer; approval to print is sought from the Assistant Director, Resources Development.
Page proofs:	all camera work for the art work, including any colour separations and the proofs of the laid-out pages go on an approval round, ending with the Education Officer.
Final correction:	any corrections to the page proofs are checked on the film at the printer by the editor and/or art editor.

* A publishing 'house' usually has its own guidelines to style printed in book form and referred to as 'house style'. It is normally strictly applied and followed by all those involved in the writing and publishing process.

Binding/trim: first ten hand-bound copies are sent from the printer for final check on printing, binding and trim. Copy to Director, Curriculum Development for approval to distribute.

Clearance for dispatch: this is given to the printer by the Education Officer.

Warehousing and distribution. Statistics used in allocating to schools their due numbers of regular publications are gathered early in each school year. schools are requested to fill in a form specifying such information as the numbers of pupils and teachers at the various class levels or those taking maori language. An investigation is currently underway into possible co-operation with the department's statistics division to combine the two areas' data collection requirements.

The type of packaging depends on the system of distribution. For the postal system, publications will be bundled, shrink or flow-wrapped, boxed or enveloped according to the numbers pre-printed on individual address labels. 'Overs' are boxed and sent to the Department of Education central store. In cases where one 'publication' might be a multiple item collation, individual packaging, collation order and protective wrapping all have to be specified.

The Government Printing Office handles the great majority of publication dispatches. For publications such as maths textbooks, the printer consigns bulk lots, usually through rail freight, to each education district store. These stores in turn allocate numbers to schools according to the pattern advised by the School Publications Branch and arrange delivery to schools by their own transport. Most other dispatches go out through the postal system. The address labels are initially sorted into mail zones which qualifies the posting for concession rates. Address labels are stored in the Government Printing Office's computerized addressing and labelling system. This prints out pre-determined allocations for various types of publications on to address labels. The School Publications Branch checks and updates the address lists on print-outs which are made available on request.

Extra copies of titles in stock are stored in either the Department of Education central store (a complete range is kept there) or in the district store (certain textbooks and handbooks). District stores make returns of their existing stock along with their annual request for stock replenishment.

Promotion and communication. Cost effectiveness in any system of free issue publishing is indicated by the use to which

the publications are put -- how much, in what ways, and by whom. An important feature of the Branch's evaluative and advisory roles is arranging publicity for new titles and investigating their reception and promotion in schools, and the arrangements for their long-term storage and accessibility as resources for learning.

Publicity for new and recent titles is given as straight information in the resources for learning column of the Education Gazette, and by display advertisements on its spare back pages. A catalogue is currently being prepared to: (a) advise schools what titles they should have; (b) move stock from storage into use; and (c) sort out and arrange for deletion of slow-moving stock.

Requests for supply. Requests for the supply of existing titles are usually in writing and sent to the School Publications Branch. The administration either supplies from reserve stock in the office (if the request is very small, or very urgent) or requisitions supply from the central store. The arrangements are time-consuming and compare poorly with those for AV material. Stock control is maintained by a branch clerk. in consultation with the central store manager. Low stock count will signal a request to the curriculum specialist concerned to advise whether a reprint should be recommended. If a reprint is justified, this will be taken on to the Branch's annual reprint programme, if funds are available.

Requesting AV materials. Materials such as filmstrips, tape/slide sets, duplicated audio and video tapes, departmental courseware, overhead projector transparencies, posters, and photo packs are available to schools either on loan or for purchase. The system described here is that used for purchasing.

All AV and computer courseware items are listed in an annually revised catalogue, with an item number for each. Schools are issued with one or two self-inking order forms, on which they specify the items they wish to purchase. These are mailed to the Visual Production Unit, which serves as a clearing-house for the requests, checks that the items are in stock and that they are correctly numbered. All three copies of the form are then sent to the central store, which packs and dispatches the items to the school, along with the top copy of the form, and a blank copy of a new order form to ensure its economical usage. The second copy is retained for the central store records, and the third is sent to the government computer service which records all the information on the sale and the stock item, and dispatches an account to the school for payment. Payments are made directly to the computer service. The sales and stock level information is readily

accessible. Low stock generates a 'low stock level' warning from the computer to the production organization.

SAMOA

Background. Samoan is the medium of instruction at the primary level (Primer 1 to Standard 4). All children must be fluent speakers and writers of Samoan before learning English. In the first year children learn everything in the vernacular. In year two they learn English orally as a second language. English reading is begun in year three.

Very few books have been written in the vernacular. This lack of reading resources has been identified as a hindrance to language development. To remedy this situation there has been an urgent move to write bilingual supplementary readers. A group of 15 writers was formed and the stories written were tried out in some schools to establish the right levels. The stories were edited and re-typed and the English Subject Organizer put some of the stories in book form. They were illustrated by a hired illustrator before going to the printers. A representative of each subject area was involved, as were some non-teacher writers, members of the English committee and an Australian consultant.

Many of the stories are not printed because of the unavailability of funds. The textbook/pupil ratio varies, but averages about 1:3. All textbooks are sold to the pupils.

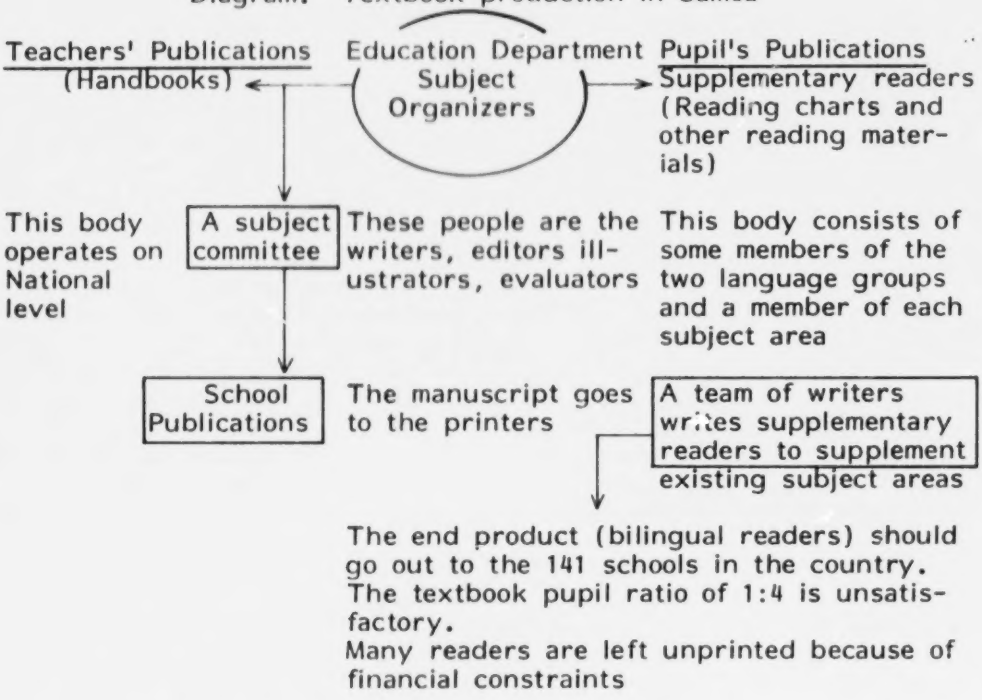
Teachers' curriculum materials. A subject committee comprising 15 competent classroom teachers from different schools, was responsible for the initial planning of the existing curriculum materials. Consultants from Macquarie University were also involved under the Australian Aid Programme. The curriculum materials, as a series of ten weekly lessons for each term, in mimeographed form, were sent to the two main islands of Upolu and Savaii as well as the two smaller islands of Manono and Apolima for trial. The subject organizer went out to all schools to evaluate the use of the materials and collect feedback on progress.

To help teachers use the materials effectively in-service training courses were held to allow them to voice criticisms and make suggestions for the improvement of the materials. Teachers were also sent a questionnaire and offered radio lessons as a follow-up to help them with methodology.

The feedback was recorded and examined by the subject committee which recommended ways to solve any problems. A group of three or four, with the consultants revised the materials. The revised materials went back to the schools in booklet form.

Textbook production. The diagram on the next page shows how textbook production is carried out.

Diagram. Textbook production in Samoa


Teachers' Publications (Handbooks)
Education Department
Subject Organizers
Pupil's Publications
Supplementary readers (Reading charts and other reading materials)
This body operates on National level
A subject committee
These people are the writers, editors illustrators, evaluators
This body consists of some members of the two language groups and a member of each subject area
School Publications
The manuscript goes to the printers
A team of writers writes supplementary readers to supplement existing subject areas
The end product (bilingual readers) should go out to the 141 schools in the country.
The textbook pupil ratio of 1:4 is unsatisfactory.
Many readers are left unprinted because of financial constraints

Print runs for teachers' publications allow one book per teacher. The books are not free but the cost is usually subsidized by the departmental budget or other source.

Distribution. The unavailability of funds seems to be the major problem regarding distribution of books. Books are received by the subject organizer from the School Publications branch. The organizer announces the availability of books during radio lessons. Teachers, school inspectors or school committee members may come to headquarters to buy the books. Teachers are also given the opportunity to buy books whenever they come to in-service training courses.

The money from book sales is received by the clerical staff of the Education Department, while the subject organizer keeps a record of receipt numbers and hands out the books. No use is made of the mailing system because of financial constraints.

Pilot project. The institute of Education of the USP is now engaged upon a small pilot project in Western Samoa which addresses some of the problems faced by many teachers responsible for teaching groups of pupils comprising more than one class level. For example, the single problem of preparing separate daily lessons for composite classes made up of only two different levels is a daunting task for even the most committed teacher. Up to 40 separate lessons may need to be prepared by the teacher over a period of one week, with little more than a teacher's handbook as the sole resource for most of the subjects. As many schools with multiple classes are frequently in remote country areas and small in size, they also often lack resources found in some larger schools where parents' contributions to school funds and monies available from school committees to purchase teaching resources are considerably greater. Even blackboards may be inadequate and limit the quantity of preparation a teacher can complete before the day's class sessions begin.

The project team of curriculum organizers, teacher educators, district inspectors, and teachers from five small rural schools with multiple classes assembled to conduct the project, considered that some form of integration of at least a proportion of the content within the existing subject areas should take place to reduce the number of separate lessons required each week. They further determined that this integration should be achieved by not only integrating at each class level in a horizontal sense across two or more subjects, but also in a vertical sense between the upper and lower class levels within the overall pupil grouping. This, for example, entails extracting content from Standard 3 and Standard 4 science and social science programmes that can be integrated within central unifying themes. The project team also interpreted a broad general educational aim issued by the Education Department, "To provide the child with a wide variety of learning experiences in the school, in order that he will be able to progress to his full potential," to imply that this would be achieved not only by the variety and range of subjects provided in the school programme, but also by the processes through which the information and concepts were acquired by the pupils; pupil self-directed and self-learning strategies also then seemed appropriate. Thus two major objectives emerged: relief for the teacher of the burdensome task of writing virtually every lesson on a blackboard or sheets of brown paper and improvement of the learning process for the pupil.

In order to achieve these objectives through the integration of different subject contents derived from existing materials, three forms of print materials were developed:

1. A small resource reader for each pupil (reusable);
2. Group activity charts providing visual information in the

form of diagrams, graphs, etc. and either individual or group activity directions (made by class teachers from supplied materials and reusable); and

3. Individual pupil activity sheets printed on low cost newsprint (consumable and disposable after pupil use or kept as permanent reference by the individual pupils).

The provision of print materials in these three forms rather than in single teacher-booklets with information to be copied on to blackboards seemed to provide immediately a set of conditions likely to promote a variety of pupil-to-pupil interaction and pupil-to-material interaction. Micro-trialling of the charts and individual pupil activity sheets have produced positive pupil reaction within the contexts of individual activities applying self-learning and group interaction learning processes. Trialling of pupil texts has not yet been undertaken as these are still with the printers, and will be tested out during the phase when the levels for which the materials have been designed are provided to the five project schools.

An analysis of the number of pupils throughout the country in classes which would need the final products indicates slightly under 600 pupils spread among almost 30 classes. Hence, if the unit of work demands some eight individual pupil activity sheets printed back-to-back on single sheets, an annual production of just under 2,500 sheets would need to be achieved. If, as seem probable by the project team's examination of existing curriculum materials, probably six integrated thematic units would be possible in any one year a final production figure of 15,000 single activity sheets would require reprinting each year, and distributed nationally at an approximate cost of $360 (W.S.). The initial costs of the pupils' text and class work charts have not yet been computed.

The materials are collected from the printing by headquarters staff. There is no warehouse so books are stored in whatever space is available in the Annex Office. Distribution is controlled from there and all work from collecting, counting, packaging, distributing and storing is taken care of by three Education Officers. Sometimes a few teachers are called in to help with the counting of task cards, books and lifting of cartons of books, transporting to the wharf for shipping to island schools. The cost of freight comes from the Ministry's budget. Administratively there are five districts each headed by an Area Organizer and helped by two supervising teachers. Normally all schools are notified by means of scheduled radio broadcasts that materials are ready. Every book is stamped and labelled with the name of each individual school, to make sure that each school gets the right number of copies from their district centres.

TONGA

Background. Tonga's 169 islands, of which only 36 are inhabited, comprise three main groups named Tongatapu/'Eua, Ha'apai and Vava'u/two Niuas. Out of the total population of about 100,000 people, there are 16,921 primary school pupils (1984 end of year figures). There are 112 primary schools - 100 government schools and 12 mission schools. Administratively, the schools are divided into five Education Districts according to the geographic location of the schools. Each district is in charge of an Area Organizer with two Supervising Teachers who play important roles administratively and professionally to schools in their respective districts.

Primary education. There is a six-year, compulsory primary education system, with children sitting the Secondary Schools Entrance Examination (SCEE) at the end of the sixth year. All government primary schools follow a common curriculum covering Tongan language, mathematics, English, environmental science (health, social studies, science), writing, singing, art and craft, and physical education. The Minister of Education is responsible to Government for all administrative and professional functions and work of the Ministry. The Director, assisted by senior officers is responsible to the Minister in the implementation and general administration of the various policies and programmes.

The Curriculum Unit is responsible for the development of the curriculum for both primary and secondary. The officer in charge of the Unit coordinates all curriculum work with writers and overseas consultants. Planning of the development of materials was done both in-country and in Australia, where most of the writing was done by teams of teachers and education officers, with the help of Australian consultants and funded by ADAB. The curriculum materials currently in all primary schools are mathematics books for teachers, English syllabus (all levels) for teachers, resource book for teachers, booklets for pupils, South Pacific Commission (SPC) readers, environmental science booklets (health, science, social studies) for teachers and task cards and charts for pupils. In other subject areas teachers are guided by the syllabus outline. In almost all cases every teacher teaches all subjects in the curriculum. Those teachers in multiple and composite class situations really work under pressure. On the whole a lot of the work is geared towards the SCEE.

Language and policies. All subjects at primary level are taught in the vernacular except English. English is taught as a second language in a block timetable of 80 minutes for lower classes and 90 minutes for upper classes covering oral reading, word study activities, written work and the SPC reading programme. English in Class I is taught orally and as informally

as possible. From Class II onwards there is one English language broadcast a week along with vernacular broadcasts on health, science and social studies.

Enough curriculum materials have been printed for every teacher to have a copy of environmental science and English. Children share booklets and task cards, one set between three to four children. Supplies for new schools and replacements are kept in stock. The books are issued free of charge to teachers and pupils in both mission and government primary schools.

Teacher training. The initial training of teachers for primary schools is conducted locally in the only Government Teachers College under a two-year training programme. They follow an integrated course of study. Most students enter college with a few years of teaching experience and are already well versed in the existing curriculum materials in schools.

In-service training is continuous either as school-based or in Centres where teachers come together for workshops on curriculum materials. Overseas consultants conduct some workshops but most in country in-servicing of teachers is done by Curriculum Writers, Area Organizers and Supervising Teachers who also work as Resource personnel. Some have received retraining overseas in New Zealand and Australia.

Some in-service training is done from the radio during the Friday broadcast. Teachers are kept up to date with all curriculum matters through these broadcasts.

Testing/evaluation. New materials are trialled in pilot schools. These pilot schools have a resource person, that is a curriculum writer actually working in the school to readily help the staff with the materials. Supervisors from administration visit these schools and help the teachers. The teachers attend workshops in Centres. They supply the writing team with feedback which is useful in the revision of the materials. Programmes are evaluated by forming tests (Oral and Written) for the pupils. The tests are administered in sample schools throughout the Kingdom and pilot schools. Some results have been computerized in Australia and it was found that the results of Pilot Schools were far better than those of Sample Schools. Testing is continuing at all levels and conducted by teachers. The yearly national Secondary Entrance Examination reflects how teachers have taught the materials. It has been planned that another national evaluation of the curriculum be conducted in five years time.

Budget/funding. The Education services are paid for mostly out of public funds. The two national examinations use up a lot of

the budget for materials, travelling of examiners/hiring of boats, etc.

All the curriculum materials have been, and are still, funded by the Australian Development Assistance Bureau (ADAB). The only part normally paid for by the Ministry is cost of freight incurred in sending the curriculum materials to schools on the inter-islands vessel.

Other aspects. It has been planned to set up a printing division as part of the Curriculum Unit with the aim of doing curriculum printing in future with a donated offset machine. A trainee selected by the Government Printer from his staff, is to be sent for training.

Co-ordination of the whole Curriculum Development Programme is done by the Curriculum Officer. Co-ordination of work between writing teams and consultants concerning workshops and programmes for in-servicing of materials and in-servicing of Resource teachers is done by team leaders.

Production. The quality of production is controlled by materials and funds available, and also by what the co-ordinator finalizes in consultation with the printer. All manuscripts have been prepared as a team effort in writing and illustrating. Two teachers are used as illustrators and for on the job training. When scripts from writers were ready, they were edited by consultants then typed on stencils. Copies are run off for team members who discuss them and make addition or deletion before trialling. The materials produced for trialling were used by the pilot schools for three years and during the fourth year some of the English materials were received (Classes 4-6 only). There was a gap of two years when nothing was done because there were no funds. Towards the end of 1984 ADAB once again made funds available so production picked up from where it left off. A quick revision made it possible to have Term 1 materials ready at the beginning of 1985.

During Term I work continued on Term II's materials for printing and likewise in Term II with Term III materials. Printing of Term III materials is nearly completed and hopefully the final distribution this year will take place in September.

Costing. All printing is done by Government Printer. Manuscripts are sent in, in ready to print form with illustrations and cover. The Government Printer gives an estimated cost for the printing, but when the bills arrive there is always a considerable difference and the explanation given is that it is due to inflation - cost of materials etc.

Book specifications. Materials are handed in for printing with specifications - size, colour of cover, number to be printed - and on the spot arrangements are made regarding time for picking up of materials for distributing. All curriculum materials are printed on A4 paper both teachers and pupils for cost effectiveness.

Other aspects. After the materials have been handed in with specifications the finished production is collected after four to six weeks. Invoicing is done towards the end of the financial year which is June.

There are other private printing facilities which teachers make use of for reproducing teaching materials like charts, pre-reading materials in the vernacular, cards, etc. Some schools have raised funds through their Parent-Teacher Associations and have bought duplicating machines to do their own printing of teaching and learning materials.

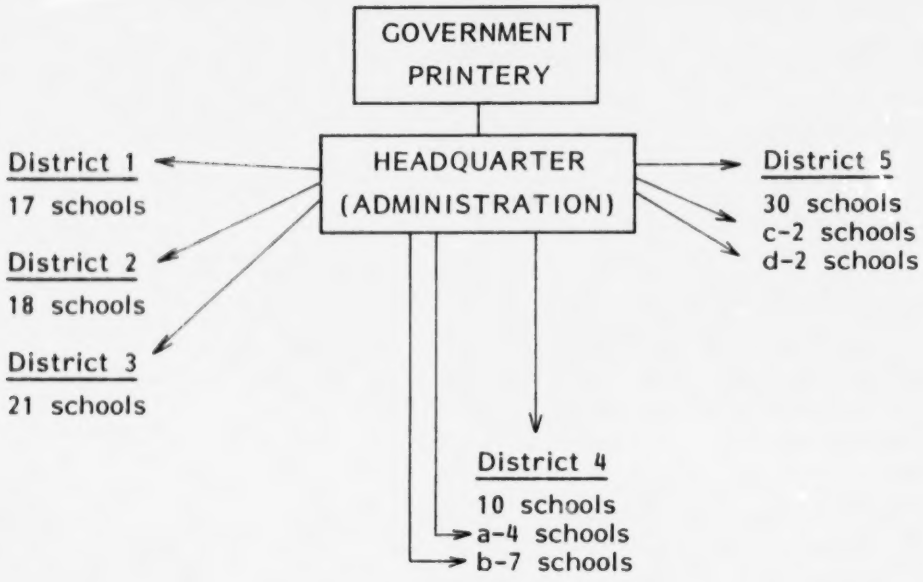
The production of learning and teaching materials by the Audio Visual Aid Centre which is financed by the Government, has greatly aided the teachers in the last ten years.

Distribution channels

1. Direct distribution to schools in districts 1, 2 and 3 or books are counted and given to each area organizer with a list as how to distribute the materials (see diagram). Sometimes teachers on the mainland come themselves and collect the books often they get the message on the radio.
2. Books are sent with a distribution list to Area Organizers in districts 4 and 5. But there are schools in districts 4 and 5 that materials are sent to directly because of locations and shipping schedules. These direct distribution to schools up north are marked as (a) and (b) in district 4 and (c) and (d) in district 5 as in the diagram on page 29.

The Master Record of all materials printed and issued is kept at headquarters. Each individual school keeps a stock book and that is checked by district officers and Inspectors when doing their annual inspections.

Sets of materials are also distributed are: (i) a set for the Minister; (ii) a set for the Director; (iii) a set for Curriculum Unit; (iv) a set for Australian High Commissioner; and (v) 20 sets for Training College. The rest are at headquarters where there are enough supplies for the next ten years for replacement and new schools if any.



Sometimes books do not arrive at their destinations; especially out in the island schools. When this happens headquarters staff pack and send the number of copies to make up the total already on record. Sometimes the distributor at the other end is contacted to check distribution and report back. In some cases it has been found that some schools receive more than their share.

Distribution is a considerable problem especially in District 4 and 5 where they have to further distribute the materials to island schools. Books lost and damaged due to natural disasters are replaced.

TUVALU

Background. Tuvalu is a cluster of nine low-lying atolls scattered over 1.3 million square kilometres of the Central Pacific. Despite this large mass of water, the total land area is only about 26 square kilometres. The atolls extend more than 560 kilometres in a winding line from Nanumea in the north to Niulakita in the south. All islands are of coral formation, seldom rising more than 4.6 metres above sea-level. Tuvalu's largest island (Vaitupu, which takes up one-fifth of the total land area, is intermediate in character, between an atoll and a reef island. It has a large virtually landlocked central lagoon. Only the lagoons of Funafuti and Nukufetau are navigable by ocean-going vessels.

Tuvalu became an independent constitutional monarchy on 1 October 1978. Until October 1975 when it became separated from the Gilbert Islands, the group was known as the Ellice Islands. At present her Majesty Queen Elizabeth II is the Head of State and is represented in the country by a Tuvaluan Governor-General. The Tuvalu Parliament consists of a single chamber with 12 members. The Prime Minister and four other ministers form up the Cabinet.

Transport. Tuvalu's port of entry is Funafuti, which has a deep water lagoon with three navigable entrance passages. A deep water wharf allows ships with a draught of five metres to come along side. The Pacific Forum Line began a feeder service to Funafuti in 1982. The service is every six weeks. The Warner Pacific Line also calls regularly. The islands of Tuvalu are serviced internally by only one freighter, the Nwaga once every two to three weeks. Funafuti has the only operational airfield. The service between Tuvalu and Fiji is currently operated three times a week by Fiji Air and there is a weekly service to Kiribati operated by Air Tungaru.

Communications. There is an efficient telegraph service, supplemented by a single-channel speech telephone, between all islands of the group and connecting with the international network via Suva. Since 1981, Tuvalu has been connected with the international telex service.

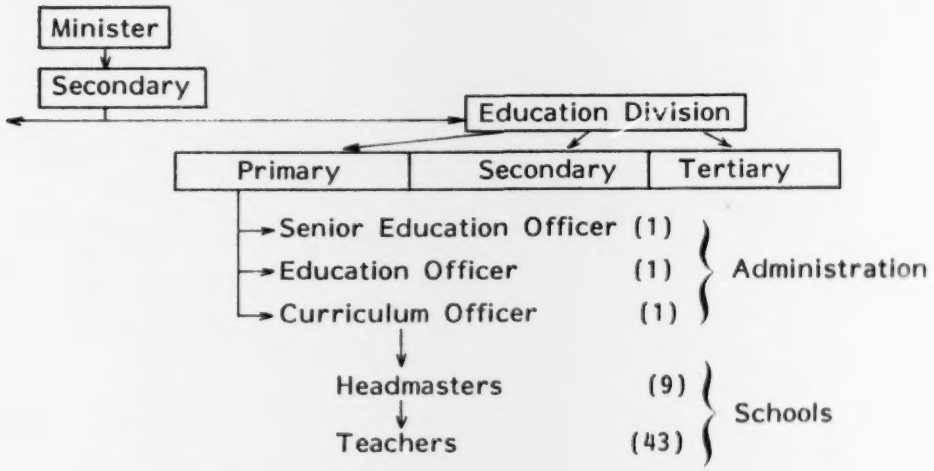
Primary education. There are primary schools on each of the nine islands. All children in Tuvalu attend primary school. Enrolment in 1985 was around 1300. Children enter school at the age of 5 or 6 years, and those selected transfer to secondary school at ages 11 to 13. The primary schools consist of seven classes (Classes I-VII) and each is staffed by trained teachers; the teacher/pupil ratio is 1:25.

Community Training Centres which cater for pupils of Classes VIII, IX and X were established during the period 1979-1983. The main objectives of these centres is to provide basic training and skills appropriate to the rural way of life for children who do not go to secondary education. Subjects taught include English, mathematics, local history and customs, woodwork, local craft, cooking and sewing. There are about 300 pupils now enrolled in these centres.

The Education Division is under the Ministry of Social Services. The set-up is shown on the next page.

Curriculum development (primary). The education set up is very small in Tuvalu, therefore very little have taken place in the form of material production for primary curriculum. Most of the

materials used in schools are produced from other countries outside Tuvalu.



A few years after independence, there was a great felt need to rewrite the school curriculum and to develop national programmes suited to the needs of the pupils in line with the aims and objectives of the education policy.

Production. In 1982 the first workshop in the rewriting of the new Environmental Science syllabus was conducted. All teachers were involved in this new undertaking. For the past three years, these workshops have been going on. The finished materials, which were produced in handwritten form by the teachers themselves have been printed by the Institute of Education, University of the South Pacific (USP) and have been sent out to schools for trial purposes. A lot of the feedback is required from the teachers and the materials will have to be evaluated, revised and reprinted before being finally adopted as part of the curriculum. It is expected that this exercise will take another one or two years before it is completed. Funding for the workshops was provided for by the Australian Development Assistance Programme (ADAB) and the consultancy work was provided by the Institute of Education, USP.

A similar workshop was also conducted in 1984 for vernacular readers in the lower classes. Two more were conducted in 1985. So far, only a few readers have been written by the teachers themselves and are not yet ready for printing. These workshops were funded by the New Zealand Government and consultancy work is again provided by USP.

At the beginning of 1985 an English Language Panel was established and met for the first time to discuss and make plans for the production of a completely new English programme for the primary schools. The members of the panel include a Curriculum Adviser from the United Kingdom (seconded to Tuvalu for a period of two years for this special task, the education staff, the teachers (one from each school), and one from each of the three other educational institutes in Tuvalu.

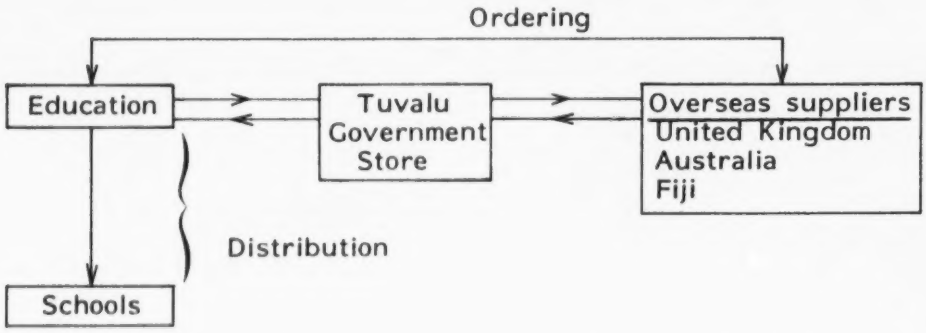
The actual writing workshop was conducted immediately after the panel meeting. The writing which was done by the teachers themselves, with the help and guidance from the Curriculum Adviser, is expected to be completed within the next one to one and a half years at the end of which Tuvalu will have its own English programme to be used in all its primary schools for the first time.

The final printing for the above programmes will have to be done outside Tuvalu as Tuvalu has no proper printing facilities. This will require funding and this will require a lot of planning before it can get to that stage.

As Tuvalu is a very small country and its education set up very simple compared with other Pacific countries, the distribution of textbooks and other supportive materials is, in itself, simple too. About 90 per cent of these materials are imported while the other 10 per cent are produced in the country. This can be best described by the simple illustration below and its brief description.

Primary education is free but each year the government grants the Education Department an annual recurrent budget calculated at about A$8 per child attending primary school during that year. The figures are estimated from school statistics which are prepared every March so that the following year's budget may be worked out. This is for school supplies and textbooks only. The Senior Education Officer is directly responsible for this supply fund but there are special occasions when the Secretary's approval is necessary before utilizing this fund. To avoid over-expenditure, the accounting officer must be consulted as to how much money remains before each order is made.

Somewhere in June/July, after checking the school supplies to find out what materials are needed for next year's school work, education places an order through an indent to the Government Stores. (For other urgent requirements, an order can be made to Government Stores at any time). Government Stores sends the order to the overseas agent who in turn places it with the supplier indicated in the indent. The overseas supplier sends the order to the Government Stores with an invoice. Everything must be sent by ship and the cargo insured. On receiving the order,



Government Stores checks the invoice against the copy of the original indent. The stores are then placed in the Government warehouse near the wharf. All damage, loss or discrepancies must be reported back to the overseas agent who in turn informs the supplier. So far this has not been necessary. The accounting officer of the Education Department arranges payment of the order. Then the Government Stores hands it over.

The Education Department transports the order by truck or car to its small cargo depot ready now for distribution to schools. Each school is issued with a requisition form for ordering its own school supplies. On receiving these, the supplies are repacked by staff of the Education Department. Sometimes when large quantities are needed by the schools, temporary assistance from unemployed persons may be obtained. These are often paid money for this assistance. The supplies are then transported back to the Government warehouse by truck or car to await shipment to the schools.

A local government purchase order (LPO) is issued to the Ministry of Communication for the freight of these supplies to the island schools. Cargo handling from warehouse onto the ship is done by the wharf labourers. The sole government freighter takes the supplies to the islands where they are taken ashore by the vessel's cargo boat. Normally the Headmaster of a school arranges with the Island Council for the supplies to be taken from the shore to the school. This is done either by council tractor or labourers.

The Headmaster checks the supplies with the issue voucher, one he retains as his official record while the other one is sent back to the Education Department. Short or over supplied materials are recorded and the information relayed to education for information and record. Short supplied items are supplemented by the next trip of the vessel. Damage is also noted and reported, but damage very rarely happens. The visiting education staff keep checking on these supplies whenever they visit the school, which may be once every term or once a year.

Available typing facilities

Country	Manual	Electric	Selectric	Composer	Processor	Computer-ized
Australia	_/	_/	Education Depart-ment	Govern-ment Printer	Education Depart-ment	Govern-ment Printer
Fiji	_/	_/			Order one	_/
Tonga	_/	_/		Govern-ment Printer	Govern-ment Printer	
Tuvalu	Schools _/	Govern-ment Typing Pool				
W.Samoa	_/	_/	_/			
PIERC	_/	_/	_/	(Memory Typewriter) _/		
New Zealand	_/	_/	_/	_/	_/	_/
Kiribati	_/	_/				

Chapter Three

PROBLEMS, INNOVATIVE APPROACHES AND SUGGESTIONS

Introduction

Some 30 years have passed since most island countries of the South Pacific commenced rapid expansion of primary education to provide schooling for almost all children of the age group 5 to 13 years, and some 10 to 12 years since these countries began curriculum reforms aimed largely at the creation of primary school programmes more relevant to their individual social/cultural environments and development aspirations. However, in spite of continued efforts by Education Ministries, with support from external aid, to meet the schools' material needs created by the rapid expansion of the system and comprehensive changes to curricula, pupils texts and other learning materials in school are still very limited. The participants from Tonga reported that provision of textbooks is very limited, there is a great need of them, but in most schools apart from curriculum materials and books issued by the Ministry reading books for children is next to nothing. The current situation in Samoa as far as textbook development is concerned, was in the opinion of the participant, unsatisfactory. Samoa is indeed suffering from a lack of reading materials.

Inadequate Government funding to increase supplies was given as a major reason by participants from three countries. A major constraint for language learning is financial, as supply depends on availability of funds. Once books are no longer free-issue the distribution to schools slow down.

Other factors cited affecting the production of texts were lack of staff, inadequate machinery, inadequate maintenance due to shortage of funds and the lack of trained illustrators. Illustrations are being done by people who show artistic promise.

During the early phases of the present on-going, and in many countries well-advanced primary curriculum reforms, curriculum units were concerned largely with the production of teachers' subject guides containing daily or weekly lesson plans with reading pieces, charts, illustrations and exercises which teachers were

teachers were expected to reproduce on blackboards or large sheets of paper if these were available. The Samoan participant reported that as far as textbook development is concerned the only books now available are the schemes of work or the Teachers' Handbook in six subjects for all levels. One of the problem areas identified is the inadequacy of reading books in the vernacular. Teachers have to follow exactly what is in the textbook and have to have their own copy of the textbook as their personal English is not up to the expected standard.

Recently some curriculum designers have produced pupils' booklets and activity cards. Many more are planned, or have been written and await funds, to print and distribute. Such resources were issued free to all schools until project funds obtained from external sources for curriculum development were exhausted or until the number of subjects under development increased costs to proportions beyond the capacity of Education Ministries to continue free issue of pupils materials, except on a restricted basis, well below a satisfactory pupil/text ratio.

Some parent groups and supporting school committees do purchase some additional materials from Education Departments' supply divisions when made available, and appropriate teachers' aids from local stationery stores when stocked. Some materials such as readers are purchased by individual parents.

Assistance from donor countries has been received in the form of book supplies intended to augment local effort. Two countries reported that aid had been received in the form of pre-reading books, Readers, workbooks and supplementary Readers produced by the South Pacific Commission; School Journals from the New Zealand Department of Education and other suitable books from private overseas organizations like Ashton Scholastic; and in the preparation of supplementary readers funded by ADAB.

Nevertheless, in spite of the commitment and determination of island Governments, demonstrated in the large amounts of aid funding they have been prepared to direct into education curriculum development; the support from donor countries of additional print materials and some teaching aids; the efforts of school committees to supply resources; and the willingness of some parents to purchase books for their children, supplies of teaching resources remain grossly inadequate both in number and kind. This dearth of sufficient and sometimes almost complete lack of pupil materials which might contribute to a variety of pupil learning modes, is a feature of the primary school systems in the Pacific region that needs urgent remedial action.

The phase, or point, along the path of school development in curriculum terms at which island countries of the South Pacific seem now to have reached, following the provision of new

syllabuses and teachers guides, is the development and provision of materials that can be placed in the hands of the pupils; reading texts being seen by many regional curriculum developers as the priority need. This being so and given the severe financial constraints with which this is to be achieved, a single standard subject text seems an attractive (and may prove in the immediate future the only feasible means) of achieving some individualized learning, and a way of diversifying learning experiences in primary classes at this point in time.

Some advantages and disadvantages of single subject texts are outlined below:

Advantages	Disadvantages
* ensures important concepts are available to pupils	* texts usually written at one reading level
* a wider range of question types can be posed	* promotes a single learning mode (reading)
* exposure to pupils of a minimum content is assured	* assumed that all pupils read positively to the text and can learn successfully through reading.

A major problem, that all island education systems now face is one of improving learning processes in order to raise educational standards, yet reducing costs, or at least reducing the rate of increase in production costs of educational materials. Two fundamental questions need to be addressed in the context of these objectives:

1. Do pupils' texts in fact provide the best learning process at every level of the primary system?
2. Are they more critical to the learning processes at some levels rather than others?

Evidence already exists in two South Pacific countries that early primary levels, Classes 1 and 2, where the learning approach utilize themes incorporating topics related to the immediate environment and the pupils' experiences, teachers are quite capable of generating much of their own language materials in sufficient quantities to meet the learning needs of their pupils. In such circumstances, paper, markers, cardboard and scissors, etc., become more appropriate than printed texts from an education department printery. Pupils themselves have opportunities of

displaying stories for 'sharing' with their peers; older pupils can produce stories for the younger pupils to 'share' with them; teachers can 'craft' books to 'share' with the entire class. Soon quite large stocks of varied material both fictitious and factual can be built up and preserved to form class libraries. The impact on the learning environment is immense, and the vital communication function of language is immeasurably enhanced.

Such strategies adopted at the lower levels release resources that can be applied to the production of more traditional texts at later levels (the fourth and fifth years in the primary system) when the reading competencies pupils have acquired at the earlier stages need to be applied intensively across as wide a range of reading materials as possible.

AUSTRALIA

Problems and future plans

Problem 1. Ensuring all educators are familiar will all material being produced and that schools know when to anticipate its arrival.

Future plan. The only publishing projects that are allowed to be worked on are those that receive the approval of the Priority Planning Group. Those projects will be advertised widely to schools and curriculum developers.

Problem 2. To make sure projects have a definite life span and are not allowed to drift on. The overall time allotted for a project must be sufficient to all for planning, production and dissemination. A priority rating must be given to each job.

Future plan. The Priority Planning Group will decide which projects will be funded and for what length of time - usually 3 or 5 years.

Problem 3. Keeping final costs within the range of estimated prices.

Future plan. Original price estimates must include estimated costs of author's and artist's correction which are unavoidable in most publishing jobs.

The Priority Planning Group ensures that all parts of a project are included in the original budget - advertising, trial copies, in-service training, postage. A limit will be placed on the number of free copies distributed to schools. Teachers will be encouraged to purchase their own copies.

Problem 4. To limit the paper warfare directed at schools. Are all materials essential? Are newsletters necessary?

Future plan. Amalgamation of many small publications into a newspaper for teachers. This news publication would contain professional development type articles, information about new products, education news and happenings in schools. Ideally one copy would be printed for each teacher and school councillor.

A sliding scale of distribution will be arranged so that standard number of copies of curriculum material are not sent to all schools. Large schools will receive multiple copies, but one-teacher schools will only receive one copy.

Problem 5. That resources are not being used to print material that is available elsewhere.

Future plan. Much more interaction with publishing units in other Australian States and New Zealand to ensure that material is not duplicated and set up strategies for marketing products Australia and Pacific wide at discounted rates. Agreements will be made to market products such as South Australia's study print sets on a national basis.

Problem 6. The high cost of printing catalogues to make teachers aware of material available and the problem of schools wanting to order copies of all material appearing in the catalogue.

Future plan. A computerized data base, called EDLINE, will be developed and put on line to every school in the State. This will mean that every school will have immediate access to information on other schools, subjects taught, enrolment numbers, curriculum material produced for teachers and students, and where it can be obtained.

Schools have to list separately all material required. They cannot say copies of items 1-101 or a copy of all products in the catalogue.

Problem 7. The shortage of money to pay for new publications. At the moment, all money from sales of material goes into the Government's Consolidated Revenue. If a product is successful the Education Department suffers as it has to pay for more copies to be printed, and this extra cost is not reimbursed.

Future plan. A Trust or Working Account has been set up with the Government Printer and the Treasury. This will enable profit accrued from the sales of material to teachers and students to be used to print new materials and improve the quality of existing material. The account will pay for support material to

accompany readers such as audio tapes, wall charts, videos and covers to store the magazines.

Problem 8. Ensuring material is read.

Future plan. Editors and curriculum writers hold workshops to try to encourage the use of dejargonised language that can be understood by all teachers and students. Artists try to convey as much information as possible in visual formats. Large slabs of text are to be avoided at all cost.

Problem 9. Use of professional staff to do basic clerical jobs such as distribution mail outs, and typing.

Future plan. Employment of casual labour on a part-time basis to assist in times of crisis. Part of the annual budget allocation will be set aside for such 'freelance' employment.

Problem 10. Storage of material when copies are not sent to schools but kept for sale.

Future plan. Low cost storage is being sought away from the central business district and a courier employed to bring in supplies to stock the central bookshop as required.

Innovative approaches

1. Printing multiple copies of colour banners for newsletters and having these overprinted in black when newsletters are printed throughout the year - gives the appearance of a two-colour production at a much reduced cost.
2. Establishing a Priority Planning Group consisting of Curriculum Developers, Publisher, In-service Training and and Information representatives. This means all areas of the Education Department have an awareness of what is being produced and what priority rating is given.
3. Establishment of a Production Department to ensure all projects stay to schedule. Initial production meetings introduce clients to the editor and artist involved and show samples of types of products - e.g. B5 perfect bound offset paper. All liaison with the Government Printer is done by the Production Department, not the clients.
4. Standardizing all procedures to add speed and efficiency to operation.
   - Designing standard packages - type faces, cover design.

- Having standard print runs two copies to all schools, copies to all teachers, and one copy per school.
- A standard complimentary list.

5. Development of a corporate image so that it will be obvious what are official Education Department publications.
6. Adoption of procedures used by commercial publishing houses - blurbs on back covers to make it clear what a book is about, advertising on back pages to refer to other relevant publications, clear statements of where publications are obtainable.
7. Use of freelance staff to supplement staff employed by the Education Department. Rather than having additional full-time staff it is more profitable to use the salary money on freelance art and editorial assistance in pressure times.
8. Use of the Government Printer print bill to pay for freelance art and editorial assistance. Clients billed by the Government Printer then pay for editorial and art help that would previously have been paid for by the Education Department. This also means that artists and editors employed by the Education Department have more time to work on internal jobs as external jobs are freelanced.
9. Holding Writers Workshops to help people from various regions and sections of the Education Department to prepare newsletters and breadsheets. These are basic courses on publishing.
10. Use of three-colour printing to replace full colour. This saves greatly on the cost of plates and allows the publication of readers that appear full colour. In a 16-page magazine, approximately $1,000 per issue is saved by this process.

Follow-up activities

1. Enquire of Australian Foreign Affairs if funds are available to send surplus copies of school magazines to Pacific Island countries.
2. Circulate to Education Department heads the problem areas seen in getting textbooks into schools, to highlight the fact that problems are universal and similar strategies are being used to overcome these.
3. Send samples of Victorian produced readers to Pacific Island countries to make them aware of the material available.

4. Circulate the managing and motivating people training module to section heads as a basis for a future meeting on improving staff morale.
5. Include Unesco ROEAP on the mailing list for future educational publications.

FIJI

Quality of production

1. Appropriate technology is available but choosing it for the job to be done is often not appropriately done either in an attempt at cost saving or through lack of knowledge.
2. In certain sections quality is deteriorating because of lack of appropriate staff. Compacting pages to save cost is not a good move because teachers will not read them.
3. Staff training - The present staff should be given on the job training to learn to handle more than one operation so the work is not held up at any one stage if a particular operator is away. The composer typist requires further training. The writers require training on basic book design.

Funding

The programmes that are launched by outside agencies lack the continuity of funds. This leaves no option but to reduce the standard of production of materials or in some cases abandon the support materials.

The phasing out of curriculum writers and support materials is a concern and to find a solution for it is a problem. Much curriculum work is being carried out in the Training College, CDU and resources centre. This requires further co-ordination.

Suggestion

It would be valuable if someone with sound knowledge of production methods could provide on the job training for improvement and efficiency of work.

KIRIBATI

Problems

1. Training for CDU staff - Trained writers or curriculum developers are needed to promote quality in materials being

printed. Adequate training programmes would help this problem and build self-confidence in the trainee concerned.

2. Lack of communication between decision makers and curriculum developers/writers - Policy makers at the Ministry of Education do not always communicate their decisions to the curriculum developers. This sometimes results in confusion in the system and causes delays in the production process.

3. Over-loading - The demands on the CDU to print other office materials e.g. statistics and reports, has caused a lot of interruptions in the production of school materials and delays in sending the materials to schools.

4. Shipment of materials - The present setting up of the shipping system causes much inconvenience in the distribution process. This is because consignments must go through the supply division, Ferry Division and the Shipping Warehouse where arrangements for shipment take place.

Suggestion to problems

1. Training for CDU staff - Seeing that there is a need for training, the following suggestions would help for selection purpose, thus;

   i) aid fund should be sought to meet the training expenses;

   ii) course selected should be appropriate to the person sent for the training; and

   iii) the training contents should cover the needs of the trainee.

2. Lack of communication - People at the production area should bring up their problems with the concerned officers.

3. Over-loading - Aims of the CDU should be clearly listed and circularised to all officers in the Ministry of Education and TTC staff and state the problems that have caused delays in the production area.

4. Shipment of materials - A better system should be established to replace the present one. The responsible officer from education should liaise with the responsible officers from other sections who are involved in the shipment system and discuss the problems related to the shipment of

materials and to reach a better system to solve the problems.

Follow-up activities

1. To propose the establishment of a special committee which will look after the smooth running of Development Unit and to see that there is no outside interference with the aims and objectives of the development unit. The committee will be represented by the curriculum development unit, the Senior Education Officer, Principal TTC Education Officer (Supply and Development Project).
2. To pursue the Senior Education Officer to seek aid fund for the conducting of a workshop on production of material especially on aspects of book designs and style etc.

NEW ZEALAND

1. Report to Department of Education on outcomes of the seminar and discuss suggestions for local and regional initiatives. These include:
   a) PIERC/Department of Education Workshop on the development of educational materials;
   b) Pacific edition of school journal;
   c) Fellowship in educational materials development;
2. Establish regular liaison between Resource Development Division and PIERC.
3. Contribute to development of regional guide to the development of educational materials.
4. A possible follow-up to be undertaken by Pacific Islands Educational Resource Centre (PIERC) in conjunction with the Department of Education is to organize a workshop for New Zealand domiciled Pacific Islanders involved in developing resources on Pacific Islands people and cultures.

The workshop would focus on writing, editorial, illustrative and design processes, and resource persons from both PIERC and the Department of Education would offer tutorial sessions. Participants would be invited to bring draft materials for practical work. It would be desirable to also invite participants from the Pacific Island countries themselves - Cook Islands, Kiribati, Fiji, Niue, Tonga, Tuvalu, Tokelau, Vanuatu and Western Samoa - as well as a resource person from Australia experienced in these aspects of educational materials development. Participants would be people involved in educational materials development in their own coun-

tries and could expect to gain some practical experience in the process of preparing materials for production.

The cost of organizing the workshop and paying for the New Zealand participants would be borne by the Department of Education. Unesco and other agencies could be approached for assistance to fund overseas' participation.

SAMOA

Planning

Lack of finance creates the following difficulties:

a) A reduction in the number of workshops per year;

b) Dissatisfaction concerning allowance given during in-service training;

c) A shortage of Resource Materials and Resource Personnel (e.g. Artists or Photographer);

d) Unavailability of transport to carry out research and evaluation;

e) Limited opportunity to hire experts and resource people to share experience and expertise.

Inadequate organizational structures create a lack of communication between decision makers and curriculum writers leading to outcomes which might result in unnecessary changes to the present curriculum. The time factor becomes a problem now with the supplementary reading materials development, because some competent writers are not teachers and they tend to turn down invitations to attend workshops because of their own departmental commitments. The bulk of the work falls on the subject organizers shoulders because of the absence of an editor, an illustrator and someone with experience in book layout.

Production

A number of readers (bilingual) are already in book form but production is at a standstill because of financial problems. Pupils' books to go with the present Teachers' Manuals are yet to be printed. Wall charts of the basic stories in all levels, to go with the weekly lessons offered in the teacher's book are also awaiting funds for printing. This is 30 stories per level for seven levels. The completion of this material is of vital importance to the development of curriculum in the Primary Schools in Samoa as they are the first completed curriculum materials ever written by Samoan writers.

Distribution

Since books are no longer free issue, the responsibility for collecting them falls more on the headteachers and the school Committee Members in every school. However, subject organizers must execute the following procedures to make sure each school has the necessary books.

a) Inform headteachers when books are ready for distribution through daily radio lessons or in the teachers' radio programme every week.

b) Take a supply of books during the subject organizers usual school visits and sell them to schools.

c) Liaise with the School Inspector in every district and ask him to do the selling, and collect receipts later from headquarters.

d) Pursue ideas given in the content through giving in-service training courses. This has given the initiative to individual teachers to buy his or her own copy.

Follow-up activities

1. Submit a report to the Director and Minister etc.

2. Call a meeting with subject organizers: perhaps the chief printer also.

3. A workshop with the existing body of writers.

TONGA

Problems

Tonga has major problems relating to planning, production and distribution of textbooks and with teaching and learning materials.

Planning

1. Planning and approval of curriculum projects is carried out at the top three levels of the Administrative Structure.

2. Co-ordination of the work as a whole is lacking due to other obligations.

3. Certain administrative/organizational matters disrupt planned working schedule. There was a stop-gap of almost

two years and things progressed slowly from writing of materials to printing of books. Funding for Curriculum Development was diverted to another construction project. As a result there were no books ready and the writers and teachers were greatly discouraged.

4. The workload of curriculum writing is so demanding that writers who also have other responsibilities have had to work under great pressure to get the work done. Planning should specify that curriculum writing is a full-time job.

5. The printing of materials is near completion and the stock at Headquarters is kept in whatever space is available. There are no proper storage facilities, as it was not taken into consideration in planning.

Production

1. Finance - The production of textbooks and other teaching learning materials is limited because of financial constraints.

2. Need for further training of personnel - The curriculum writers did not receive any training in curriculum writing at the beginning so the pace of work was slow; a stage of trial and error. The editorial work was done by the Australian Consultants when available during the writing up workshops (Macquarie) or in-country workshops. At times materials written in country were sent to Australia for editing and found to be time consuming and some lessons even went missing and new lessons had to be developed. The writers were illustrators of their own writing.

3. Division of Labour - 'Too much per person'. The curriculum writers had other roles to fulfil on top of writing like teaching, evaluating in-service training and other administrative duties designated by their immediate superior. There was no time then for perfection.

4. Writing of materials - A major part of the writing up of the materials was done in Australia. It was good out of the country because it was only writing to be attended to - no other obligations. The consultants readily helped with writing and editing of written materials. It was also an advantage in that the materials were left there to be edited, typed, printed then sent to Tonga for trialling. This arrangement was found to be uneconomical when printed material were sent air-freight to get them out to

schools on time. The present arrangement of going through all the processes from writing to printing in country has speeded up a lot of things and books have gone to the hands of teachers and pupils.

Distribution

1. Finance - The cost of distribution is paid from the Ministry's Annual Budget which is limited towards the end of the financial year (June). When that happens, distribution must wait till funding is available in the new Financial Year (July).

2. Transport - It is not so much a problem on the mainland because the Ministry's vehicles are made available for the purpose of distribution.

   It is distribution to isolated islands schools that causes a lot of concern because of certain factors like, unfavourable weather, shipping schedules and how efficient the Ministry's contact person (Teacher-in-charge) who further handles distribution to isolated schools in that area. Books sometimes do not get to their destinations when materials are sent to administrative district centres or to a key person on an island for further distribution. Isolated island schools receive their materials much later and it is even worse out at the four schools on the northernmost group where a ship normally calls once a month.

3. Records - The master list is kept at Headquarters and each school should keep a record of all materials issued in their stock book. The only time this is looked into is when supervising teacher visits the schools or Inspectors when they go to schools for Evaluation of Teachers.

4. Stock - The stock is kept at Headquarters in whatever space is available. There are no proper storing facilities to safeguard books from certain climatic conditions, pests and dust etc.

Innovative approaches

1. Printing of materials is now done in country, it is more economical, a lot more is printed and materials are ready on time.

2. PTA fund-raising is encouraged to meet the needs of the school that cannot be met readily by the Ministry in planning, production and distribution. Some schools have

bought duplicating machines and produced their own teaching and learning materials. Some have bought story books (Book Flood Project).

3. To minimise books and teaching materials not getting to their destinations, the Ministry in its last recent distribution sent two teachers with the materials, one to Ha'apai and one to Vava'u, to distribute at the two centres only. There were no funds available to enable them to go to every school.

4. Provision of textbooks to schools has improved the morale of the teaching force.

5. All books are labelled before packaging to make sure each school gets the right number of copies from their district administrative centre or from the contact person.

6. Radio broadcast to teachers have greatly aided the distribution process.

7. There are two teachers currently doing the illustrations of the materials with no previous training.

8. The Ministry in consultation with the Government Printer is sending a trainee to undertake training to come back and operate the printing equipment.

Future plans

1. A printing section will be set up to become part of the curriculum development unit.

2. To produce a set of reading materials in the vernacular - basic readers and supplementary readers. Also English Reading Materials to take the place of SPC Reading Materials, e.g. Teachers' and Pupils Books.

3. To develop a Tongan Language Programme like English and Environmental Science, teachers currently follow a broad syllabus outline.

4. Mathematic textbooks have been in use for ten years or more and are due for revision.

5. Although English and Environmental Science Curriculum Materials have been quickly revised but they need in future to have the units/topics sequenced properly.

6. The Ministry is investigating the possibility of purchasing (through overseas aid) a ship to use for purposes such as school visits of supervising teachers administration inspection and distribution of educational materials.

7. To impose a considerable price on books ... for further printing of replacement supplies for new schools.

Suggestions

1. It is necessary to send personnels involved with curriculum development on overseas attachments for a few months to cover certain specific areas pertaining to planning, skills in writing and production of books and all the processes involved and effective ways of distribution.

2. Formal training of the technical staff for the Printing Division is necessary. It is necessary in this planning stage to seek advice and service of an overseas experts seek funds for printing equipment, printing space (building), proper storage facilities to go hand in hand with training of the personnel.

Follow-up activities

1. A verbal report to Director of Education and Ministry of Education, senior staff at Ministry of Education. Senior staff meeting Monday 9 September.

2. A written report on the seminar to be filed at Ministry of Education which would be read and new directions will be made of action and follow-up by the Director of Education.

3. As part of the report recommendation would include production of more readers in the vernacular and plans and outline of some form of English reading materials.

4. Preparation of more vernacular reading materials e.g. typesetting, editing, approval, paste-up, illustrations, all in preparation for the Education Department offset machine.

TUVALU

Follow-up activities

1. Full report of Seminar; one copy for Ministry of Education Department, one for Government. Also the same type of report by Unesco/consultants to the Seminar.

2. Discuss with Education Staff things in the report then to see what reaction they will have to the report.

3. Action things that need to be done as a result of the report of the Seminar.

USP

Follow-up activities

1. Report to Director of Institute of Education (IOE) with a summary of the seminar activities and provide an input analysis of the IOE participant to the seminar.

2. Discuss with the IOE 'Fellow' directing the USP Primary Reading Project the implications of the regional activities suggested in the Seminar report.

3. Explore possibilities of attempting a low key, first level trial project of improving story production for children by student teachers.

4. Maintain contact with regional countries represented at this Seminar, on issues raised and suggestions made at the Seminar.

SUGGESTIONS FOR REGIONAL INITIATIVES

Training in educational materials development

In discussing the various situations faced by the participating countries in the development of their educational materials, it was agreed that there were common needs in the development of expertise to achieve this.

It was suggested that a regional approach to training could be explored. A possible model was the fellowship system operated by USP's Institute of Education. Fellows, usually based at the institute, work in and with the participating countries assisting specific projects, for example, aimed towards encouraging book-based language development programmes.

A similar approach could be taken to the development of educational materials. Scope was seen for two fellowships, working in tandem:

1. Development of expertise in planning publishing and other educational materials projects, including the development of

writing and editorial skills.

2. Development of expertise in the design and production of educational materials, including the development of illustrative and graphic design skills, and familiarity with technical processes in production.

It was suggested that the general skills associated with developing, shaping and producing educational materials, were applicable to most kinds of publications and the various types of audio-visual materials. The fellowships proposed would cover the two major, and complementary, aspects of expertise in the development of educational materials. It was pointed out that fellowships of the kind envisaged would complement the work of the Primary Reading Project.

The follow-up actions were suggested:

1. To discuss the possibility of such a proposal with the Institute of Education.
2. To put forward the suggested initiative to the participating countries governments involved in the institute's annual advisory seminar, for discussion by their representatives at their next meeting.

Development of a training guide

People responsible for co-ordinating or managing the process of planning, producing and distributing educational materials require direction and training. At both the Manila and Nuku'alofa Seminars a series of modules was made available to participants based on training modules developed by Allen & Unwin, the publishers. The modules were considered for their relevance to the region's training needs in educational materials development.

The modules were reviewed in the light of detailed examination given to the issues arising from planning, producing and distributing educational materials. A succinct, but comprehensive, discussion of them was also presented to the Manila seminar in the form of a paper from IMC's former Deputy Director Alfonso De Guzman II. In all, some were found to be very useful in their present form, some needed considerable adaptation. However, some matters faced by most state educational institutions were not covered.

A tentative outline for a comprehensive guide was drawn up at Nuku'alofa, and is set out below. Some countries undertook to give detailed treatment of the topics, and it was recommended that Unesco be asked through its regional offices in Bangkok and Karachi, to co-ordinate the gathering of the material, and to bring

it to a draft stage when it could be considered further by countries in the region.

The planning, preparation, production and distribution of educational materials.

1. The aim of the guide.
2. Educational materials, a working definition.
3. Overview: the process of education materials development.
4. Planning: assessing resources, establishing purposes, procedures and mechanisms for co-ordination.
5. Staffing educational materials projects: essential functions to be performed, institutional arrangements; recruitment, training and development, management and motivation; secondments and contractual arrangements.
6. Planning and preparing content: educational considerations, planning scope and treatment; generating material, roles of development staff; relationships with contributors; trial and evaluation; readability; visualization.
7. Financial planning and preparation: arrangements for planning and monitoring financial programme; cost effectiveness exercises; data gathering for cost analysis; preparing budgets; sales and pricing policies.
8. Procurement of equipment, materials and services.
9. Production: processes and procedures; quality control; monitoring progress; management of the overall production programme.
10. Distribution: systems; mechanism; storage and stock control; orders and recorders.
11. Promotion, marketing and sales.
12. Advisory and training roles in relation to teacher education.

Training in printing processes

That workshops be held to assist staff to use equipment associated with the printing process such as headline lettering equipment and paper plate-making machines.

Information gathering dissemination

That Unesco be approached to gather information from countries in the region with a view to:

a) The establishment of a resource guide for multi-lingual typesetting;

b) Printing of readers in a variety of language as co-publication ventures. (These should include folk tales to enhance cross-cultural understanding);

c) Publishing catalogue/list of educational material developed by and available for Pacific Island countries, other than Australia and New Zealand; and

d) Preparing an illustrators copy-book, particularly figure drawings that could be traced or photocopied, and 'personalized' for use in local language materials.

Making more reading materials available

That South Pacific countries be circularized with copies of school magazines and journals from Australia and New Zealand and that financial be sought to fund the distribution of surplus issues of such magazines and readers when requested.

A Pacific edition of the New Zealand Department of Education School Journal

A discussion arose on making available run-on copies of the regular issues of the New Zealand 'School Journal' to Pacific countries. Though the benefits of well-written attractively presented material in English were appreciated, concerns were expressed about the current distribution of School Journals, and their usefulness in their current form. The following points were made during the discussion:

1. Countries currently getting the School Journal would like to increase their supply to give wider distribution to their schools.

2. There is an increasing amount of material being published in the school journal of direct interest to children and teachers in the Pacific.

3. There is, all the same, a great deal of New Zealand oriented content which makes the business of selecting suitable content from, say, a years issues, a major task for teachers in the Pacific.

4. The journal's magazinee approach, with its range of levels of reading difficulty in individual issues also makes difficult the task of selecting material of the appropriate level for children whose mother-tongue is not English.

There was considerable interest expressed in exploring a special Pacific edition of the school journal. This could be a

selection of material from a year's issues, made into several issues, one, say, for each of the existing levels. Several benefits were seen from such a move:

1. The material would be of more relevance to Pacific countries, and of greater use within classrooms there.
2. Selection could be done in consultation with all countries concerned. A Pacific-wide editorial committee convened by satellite connection was suggested as a means of facilitating this.
3. If existing film was used, production would be relatively inexpensive. The money currently spent on run-on copies of the regular issues could well cover all development and production costs of a Pacific edition.
4. Should the project get off the ground, it would act as a real incentive for Pacific Islands writers, illustrators and photographers to contribute local material.
5. Subsequent developments worth exploring could include versions, or original material in the various vernacular, and teachers' editions (say, with bound in notes as in the school journal story library).

The follow-up actions were suggested:

1. That countries which are presently using the school journals conduct an evaluation of how they are actually being used in schools.
2. That the New Zealand Department of Education develop and produce a trial Pacific edition from existing material and send copies for evaluation to countries interested.

Annex I

AGENDA

1. Opening of the Seminar.

2. Consideration of provisional schedule of work and introduction of documents.

3. Election of officers of the Seminar.

4. Presentation and consideration of country experience and future plans for production and distribution of textbooks and other related teaching/learning materials, with focus on primary education.

5. Indepth study of selected aspects, such as utilization of available skills and resources for improving the design and quality of textbooks and printed materials, while reducing their cost; based on countries innovative experience and successful approaches.

6. Consideration of suggestions for improving the effectiveness of production and distribution of textbooks through the better co-ordination of the administrative, educational and technical inputs, and other available physical and human resources.

7. Presentation and adoption of draft final report of the Seminar.

8. Closing of the Seminar.

Annex II

LIST OF PARTICIPANTS

Australia	Alan Mayberry Senior Materials Production Officer Publishing Services Education Department of Victoria 234 Queensberry Street, Carlton 3053 VICTORIA
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	Sefulu Ioane Director Pacific Islanders' Educational Resource Centre P.O. Box 46 056 Herne Bay AUCKLAND 2
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Tonga	'Aneti Fonua Acting Education Officer (Administration) P.O. Box 61 Ministry of Education NUKU'ALOFA
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Support Staff	Lia Laut (Recorder) Tonga High School NUKU'ALOFA
	Fane Fusipongi Ketu'u (Recorder) Tonga High School NUKU'ALOFA
	Lucy Kautoke (Typist) Ministry of Education NUKU'ALOFA
	'Ana Ma'u (Typist) Ministry of Education NUKU'ALOFA

Annex III

THE UNIVERSITY OF THE SOUTH PACIFIC (USP) EXTENSION SERVICES

Throughout the 11 countries USP serves the Extension Services provides university level education and training to thousands of people who do not have the opportunity to take university courses full-time on campus. The service is provided by nine extension centres established in the national capitals in nine of the regional countries. The centres act as agents and outlet points for the main extension services unit located on the main university campus at Laucala Bay in Suva, Fiji.

Four main types of courses are available to extension students:

1. Preliminary courses, equivalent to Sixth Form programmes currently in use in colleges of the region;
2. Foundation studies, equivalent to Seventh Form levels and is the common platform normally required of students studying the university's degree programmes;
3. Vocational courses, practical courses required in certificate and diploma programmes; and
4. Degree courses, equivalent to degree courses taken by on-campus students.

Sixty courses are available to form study programmes in arts and sciences through this form of distance education. New courses are continuously added and the range of courses expanded in response to regional educational needs as they develop and change.

Course materials normally comprise a study book, a compilation of additional readings bound into a single volume, one or more course texts, and a study guide detailing study procedures and suggesting timetabling of study hours over the weeks comprising each semester. The procedure for producing the thousands of books and other print materials comprising the many separate courses provided through the Extension Services system, is for teams of lecturers from the various academic schools within the university and staff from Extension Services to meet to prepare the actual course contents which Extension Services staff later develop into a suitable format for self-learning in a distance education mode at university level. Until 1982 all printing of course materials was undertaken by the printing division of the Extension

Services, but most course materials are now printed under contract to commercial printers in Suva City.

On receipt of bulk supplies of course materials from the local printers and course texts from publishing companies, central stocks are built-up at a stores division of the main Centre on Campus. From this central stock of the total range of print materials for all the courses offered by the university through distance education processes, the variety of materials needed by each centre within the separate countries is packaged by administrative assistants for despatch to each in-country Extension Centre. Most materials are sent by airmail and prepared in easy to handle parcels.

To provide these services to people spread over hundreds of thousands of square miles of oceans with hundreds of miles separating islands within countries, the university has established a comprehensive communication network. Regular weekly exchanges of information take place through a 'mail bag' service between each centre and the main Extension Services Unit on the Laucala Bay Campus. These bags of durable canvas are carried by the air services network of the regional air carriers serving the entire area. Thus student assignment to tutors regularly flow backwards and forwards along the air route.

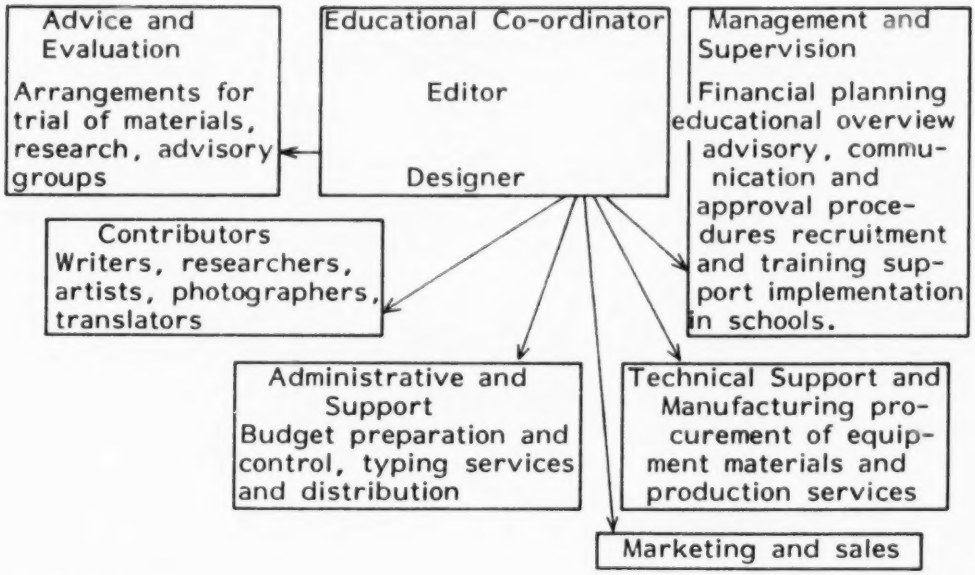
Until 1 August 1985 the university made considerable use of a satellite (ATS-I) provided by the United States Government for its regional radio communication network. By means of the network known as USPNet, staff and students at each of the various university Extension Centres could speak to one another each day - either from one centre to another, or with all centres participating. University staff as well as people from outside the university were thus able to hold conference by satellite. This facility was an extremely valuable service for administrating and maintaining the university's regional activities, especially Extension Studies.

Although the ATS-I satellite is now out of service, plans are already underway to establish a similar link during 1986 using another satellite.

Annex IV

SUGGESTED MINIMUM REQUIREMENT FOR STAFFING IN THE DEVELOPMENT OF EDUCATIONAL MATERIALS

Core Development Group


Advice and Evaluation
Arrangements for trial of materials, research, advisory groups
Educational Co-ordinator
Editor
Designer
Management and Supervision
Financial planning educational overview advisory, communication and approval procedures recruitment and training support implementation in schools.
Contributors
Writers, researchers, artists, photographers, translators
Administrative and Support
Budget preparation and control, typing services and distribution
Technical Support and Manufacturing procurement of equipment materials and production services
Marketing and sales

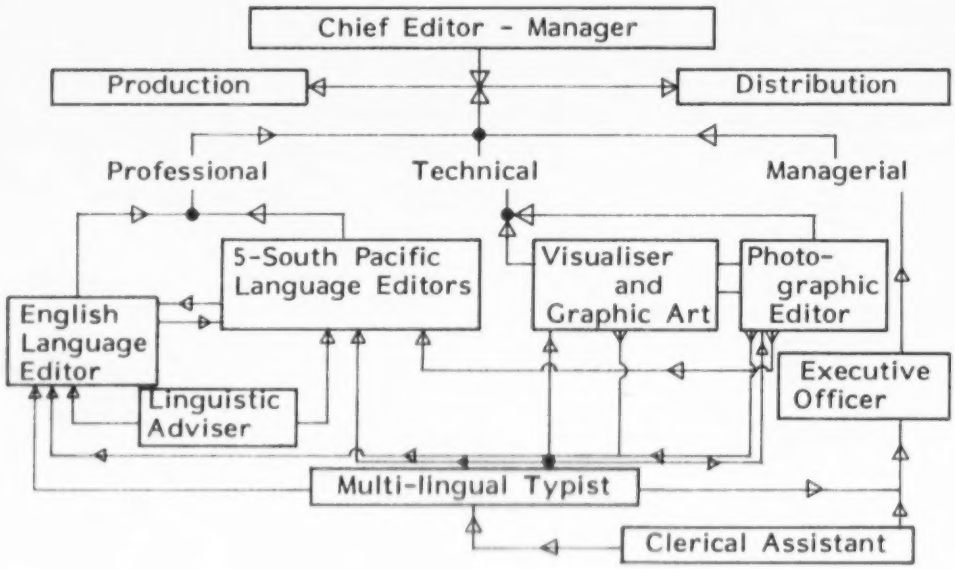
Comment

1. The designations in the 'core development group' represent the three main areas of expertise which are needed to carry through an educational materials development project. 'Educational Co-ordinator' represents the liaison between schools, advisory groups, etc. in the development, and the monitoring of all educational (e.g. curriculum related, teacher education, classroom management) aspects of the development. 'Editor' represents the agent who organizes the generation of material, that is, selects, briefs, commissions and guides authors and researchers, and ensures that all text is clear well-organized, accurate and appropriate to its audience. Another function often associated with the editor is the responsibility for ensuring that procedures are adhered to. 'Designer' represents the agent who plans the presentation of material, executes its design, arranges for all illustrative matter, specifies typography materials and methods of make up of the product, and arranges its production.

2. The boxes represent aspects of the development of educational materials that have to be dealt by someone, somehow, whatever the scale of the project. In the best of all possible worlds, there would be a network of agents, all part of a co-ordinated organization, each with well-defined responsibilities, and with clear lines of communication between all. In some situations, two or three people at the core will be having to make arrangements and take responsibility for all aspects of the development.

Annex V

THE PUBLICATIONS DEPARTMENT OF THE
PACIFIC ISLANDERS' EDUCATIONAL RESOURCE CENTRE



Key

Inter-action among the professional, technical and managerial staff showing the flow of services.

Staff forum during the preparation of materials/books.

Final decision forum of staff.

Annex VI

ROLE OF TEACHERS' COLLEGES IN NATIONAL EFFORTS TO IMPROVE LEARNING BY DEVELOPING SUPPLEMENTARY READING MATERIALS

Problems

1. Shortage of all types of language materials in primary schools throughout the region.
2. Inadequate teacher skills to generate own language materials appropriate to the needs of the pupils.

Remedial proposal

That teachers colleges incorporate into existing training courses, content that would develop first-level story production skills.

Aims of such content

1. To ensure that each student teacher acquires skills in the production of simple supplementary learning materials during the training phase.
2. To increase the supply of relevant reading materials across subject content areas of existing curriculum.

Strategies

Two approaches could be considered:

1. The design of course components within existing programmes that would operate as separated components, but contribute to a sum total of skills teachers could apply to an integrated task.
2. A programme or unit of integrated experiences within a project approach in which teachers would go through a series of evaluating cycles of activities involving the writing, trialling and evaluation of different kinds of reading materials for specific groups of pupils at different class levels, require skills in producing children's reading materials.

Existing teacher college course content to be utilized

1. Art - include skills of graphic design and functional purposes of illustrations and diagrams of learning materials.

2. Language
   - development of story-line
   - maintaining readers interest
   - appropriateness and conciseness of language.

3. Child development
   - changes in interests, activities and attitudes as children develop throughout the primary school years related to production of reading materials.

4. Content areas of science and social science
   - utilization of the subject areas to follow the interests of pupils (environmental readers -social situations, etc.)

The integration of the four course content areas comprising most teacher training programmes could result in the application and development of skills and understandings in a 'task' oriented manner, required by many island teachers if they are, in the present circumstances of reading material shortage, to provide improved educational experiences and processes for their pupils.

Annex VII

REQUISITIONING BOOKS IN FIJI

Each year the Educational Resources Centre sends a Book List to schools. This comprises about 140 titles categorized as Textbooks, Teachers Reference, Supplementary Readers, Pupils Workbooks and Stationery. Schools may purchase these from their own funds.

Book List

EDP No.	Item	Issue Unit	Unit Price
000587	Na Viti 6	No.	0.85
000586	Na Viti 5	No.	0.90

Making the requisition

Every school has a Government Supplies Requisition Book. This is completed in four copies by the Head Teacher and approved by the School Manager. Three copies go to the Government Supplies Office. One copy goes on the office file. Two copies go to the Despatch Section. One copy is retained and the other sent back to the school with the books. (Payment is made at the time of requisition).

Government Supplies Requisition No. 67842

School: _____

Address: _____

Ordered by: _____ Designation: _____

Signature: _____ Approved by: _____

EDP	Item	Unit of issue	Number required	Unit price	Total	Remarks
001364	Basic Sc. Class 5	No.	50	1.20	60.00)	Not in
001365	Basic Sc. Class 6	No.	60	1.30	78.00)	stock

Annex VIII

BASIC EQUIPMENT OF USE TO SMALL REPROGRAPHIC UNITS

1. Lettering system (such as 3M or Gestetner)

   Valuable for doing titles and headings and printing large type-face stories for infants. Various type faces are available e.g. Souvenir, Megaron/Helvetica, Times Roman. Type sizes range from 14pt - 36pt.

2. Paper plate-maker (such as Ricoh or Gestetner).

   Ideal for print runs of 500 - 2000 copies cost per plate is 45 cents and it is easier to correct errors on paper plates than metal plates.

3. Letraset

   Pre-formed letters that can be used as headings and titles. They come on sheets with about ten samples of each letter of the alphabet. The problem is vowels tend to be used quickly. The letters tend to crack in hot climates. One sheet costs $10. Some basic art layout skills are helpful if one is to use the letters professionally.

4. Roneo duplicator

   Excellent for runs of 500-2000 copies. Drums of ink can be changed to enable colour printing; the page has to be run through the duplicator three times if three colours are used. Colour registration is difficult in illustrations, but it is good for printing boxes of different colour types.

5. Addressograph machine

   Handy for printing address labels if a lot of material is sent to schools each year.

6. IBM golf ball electric typewriter

   To enable typing using a number of fonts. Some models of this machine can justify type in columns to give a professional typesetting appearance.

7. Long-arm stapler

   To enable saddle stitching of A4 or A3 booklets.

LIST OF SELECTED APEID PUBLICATIONS RELATING TO TEACHING/LEARNING MATERIALS

* *Designing instructional materials for general education and teacher training: a portfolio of experiences in Asia and Oceania. 1980.*
* *Developing instructional materials for productive skills; report. 1980.*

Inventory: low-cost educational materials; how to make, how to use, how to adapt (three volumes). 1980, 1982, 1984.

* *In-service teacher education: development innovatory strategies and instructional materials; report. 1980.*
* *Development of curricula and instructional materials with focus on mechanical and civil/building subjects; report. 1980.*

Development of curricula and instructional materials with focus on electrical and electronic subjects; report. 1981.

* *Guidelines for repackaging multi-media resources. 1982.*
* *Developing materials for biology teaching; report. 1982.*

Chemistry curriculum and teaching materials; report. 1982.

Business and commercial education: development of curricula, instructional materials, physical facilities and teacher training; report. 1982.

Distance education: exemplar training materials. 1984.

Textbooks and reading materials; report (in three volumes). 1984.

Vol. I : The "Ready to Read" Project – the New Zealand Experience
Vol. II : Outcomes of the Regional Seminar
Vol. III : Production and utilization

Instructional materials for elementary mathematics; final report. 1984. (obtainable from the National Institute for Educational Research, 6-5-22, Shimomeguro, Meguro-ku, Tokyo, Japan).

Textbooks and related teaching/learning materials for primary classes; report. 1985.

Production and distribution of textbooks; report. 1985.

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* Out of stock

The Asia and Pacific Programme of Educational Innovation for Development (APEID) has as its primary goal to contribute to the building of national capabilities for undertaking educational innovations linked to the problems of national development, thereby improving the quality of life of the people in the Member States.

All projects and activities within the framework of APEID are designed, developed and implemented co-operatively by the participating Member States through over one hundred national centres which they have associated for this purpose with APEID.

The 25 Member States participating in APEID are Afghanistan, Australia, Bangladesh, China, Fiji, India, Indonesia, Iran, Japan, Lao People's Democratic Republic, Malaysia, Maldives, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Samoa, Singapore, Socialist Republic of Viet Nam, Sri Lanka, Thailand, Tonga and Turkey.

Each country has set up a National Development Group (NDG) to identify and support educational innovations for development within the country and facilitate exchange between countries.

The Asian Centre of Educational Innovation for Development (ACEID), an integral part of the Unesco Regional Office for Education in Asia and the Pacific in Bangkok, co-ordinates the activities under APEID and assists the Associated Centres (AC) in carrying them out.

The programme areas under which the APEID activities are organized during the third cycle (1982-1986) are:

1. Universalization of education: access to education at first level by both formal and non-formal means;
2. Education for promotion of scientific and technological; competence and creativity;
3. Education and work;
4. Education and rural development;
5. Educational technology with stress on mass media and low-cost instructional materials;
6. Professional support services and training of educational personnel;
7. Co-operative studies and innovative projects of research and research-based experimentation related to educational development.